DOCUMENT RESUME

ED 239 221 CS 007 454

AUTHOR Singer, Harry, Ed.; Bean, Tom, Ed.
TITLE Learning from Text: Explanation and Strategies. Proceedings of the Preconvention Institute on Learning from Text at the Annual Meeting of the International Reading Association (28th, Anaheim, California, May 26, 1983).
INSTITUTION Learning from Text Project, Riverside, CA.
PUB DATE May 83
NOTE 133p.
PUB TYPE Collected Works - Conference Proceedings (021) -- Guides - Classroom Use - Guides (For Teachers) (052) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC06 Plus Postage.
DESCRIPTORS *Cognitive Processes; *Content Area Reading; Heuristics; History Instruction; History Textbooks; Language Skills; Learning Strategies; Models; Prior Learning; *Reading Comprehension; *Reading Instruction; Reading Research; Reading Strategies; *Study Skills; Teaching Methods; Textbook Content
IDENTIFIERS Graphic Organizers; *Learning from Text Project; Metadiscourse; *Reader Text Relationship; Textual Organization; Theory Practice Relationship

ABSTRACT

Intended for elementary and secondary school teachers, supervisors, curriculum specialists, and researchers, this report presents the proceedings of an institute on the Learning from Text Project sponsored by the University of California and the California State University systems. After an introduction by institute chairperson Deborah Hancock, the report presents the proceedings of seven sessions covering the following topics: (1) a classroom model of learning from text, (2) the relationship of language and knowledge, (3) metadiscourse in texts, (4) the use of the Learning from Text Project in a grade 10 history class, (5) the content of history texts, (6) the hierarchical organization of linear text and its effect on reading comprehension, and (7) the nature and use of graphic organizers. The report then presents a summary of the institute, a conclusion discussing high school teachers' attitudes toward the term "learning from text," and an appendix listing institute participants. (MM)

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Joint Projects Steering Committee

Learning from Text

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Learning from Text: Explanation and Strategies

Preconvention Institute on

Learning from Text

INTERNATIONAL READING ASSOCIATION'S 28TH ANNUAL CONVENTION

Anaheim, California, May 2-6, 1983

Edited by
Harry Singer
University of California, Riverside
and
Tom Bean
California State University, Fullerton

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PRECONVENTION INSTITUTE

Monday, May 2 - Tuesday, May 3

LEARNING FROM TEXT

Intended for teachers, supervisors, curriculum specialists, and researchers, grades 4-12. Special registration is required, with a limit of 100 registrants.

Chairing: Deborah Osen Hancock, California State University-Bakersfield

HILTON AT THE PARK, GARDEN ROOM

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George W. McConkie, University of Illinois, Urbana-Champaign — 11

Discussant: Avon Crismore, Center for the Study of Reading, University of Illinois, Urbana-Champaign — 15

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Coauthors of the Project are Thomas W. Bean, Charles Frazee, California State University-Fullerton; Harry Singer; Jack Sorter, Garden Grove High School, Garden Grove, CA

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Nancy Rogers-Zegarra, Charlotte-Mecklenburg School Dist., Charlotte, NC

Patricia Phelps, University of California-Riverside

Ruth Yopp Nolte, Brea-Olinda Unified School District, California

Hallie Kay Yopp, Brea-Olinda Unified School District, California

Virginia Berry, Rialto Unified School District, California

Terry Rogers, Center for the Study of Reading, Univ. of Illinois, Urbana-Champaign

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Introduction

The Learning from Text Project is jointly sponsored by the University of California and by the California State University systems. The project is co-chaired by Deborah Osen Hancock, Dean of the School of Education, California State University, Bakersfield, and by Harry Singer, Professor of Education at the University of California, Riverside. He also directs the project. Tom Bean, Associate Professor at California State University, Fullerton, is associate director.

As part of its dissemination responsibility, the Learning from Text Project conducted a Preconvention Institute at the International Reading Association's Annual Convention, Anaheim, California, May 2-3. Participants came from all areas of the United States and one came from as far away as Denmark (Mogens Jansen, President of the Danish National Association of Reading Teachers and Research Director of the Danish Institute for Educational Research). All the participants are listed in the appendix. Most were from college and universities, but some were school district and state department personnel. Although announcements were sent to some 100 superintendents within 50 mile radius of Anahein that the institute would be appropriate for high school teachers, few attended, probably because the 100 person limit for the institute had been reached early.

The Institute was held in the Garden Room of the Hilton at the Park Hotel. Sessions were conducted from 10 a.m. to 4:30 on Monday and 9 to 12 on Tuesday. A copy of the program is on the preceding page. Dean Deborah Hancock chaired the Institute. The Institute proceeded in the following way: After Deborah Hancock's introduction, Harry Singer presented his model of Learning from Text in a Classroom Situation. Then George McConkie gave a talk on language and knowledge. Avon Crismore followed with a brief talk on metadiscourse in texts. Tom Bean explained the Learning from Text Project conducted in Jack Sorter's 10th grade history class this year. Jack Sorter added his perspective. Charles Frazee presented his views on the content of history texts. Dan Donlan explained how linear

text can be organized into a hierarchical structure at the word, sentence, and paragraph levels, and the effect of this type of organization on reading comprehension. Judie Thelen discussed the development of graphic organizers and how they can be used for relating prior knowledge to new knowledge. Owen Boyle stated that graphic organizers are a subcategory of cognitive mapping principles and showed the audience some developmental examples of mapping. Jean Dreher summarized the entire institute. Harry Singer concluded the conference with a report on his attitude study which indicated that high school teachers prefer "learning from text" to "reading" as a label for their instructional activities. Singer suggested that high schools, college, and universities should use the phrase "learning from text," instead of "reading" for inservice training projects, centers, and classroom instruction.

Some presenters gave illustrated talks. Other presenters (Dan Donlan, Judie Thelen, and Owen Boyle) also divided the Institute into six groups for hierarchical ordering of text and mapping of text. Their handouts are part of the Proceedings. Assisting in these groups were Practice-Demonstrators: Virginia Berry, Ruth Nolte, Patricia Phelps, Teresa Rogers, Nancy Rogers-Zegarra, and Hallie Yopp.

Joining the Learning from Text Project to put on the Institute were George McConkie and Avon Crismore, both from the Center for the Study of Reading, University of Illinois, Champaign, Illinois. Irene Athey, Dean of the School of Education, Rutgers University, served as a discussant. Judie Thelen, Frostburg State College and an IRA Board member, gave a cartoon-illustrated presentation on graphic organizers; unfortunately copyright laws prevented us from reproducing the cartoons, but those interested might write to Judie Thelen for information about her video tapes which do contain the cartoons. However, she did write a paper for our Proceedings which contains illustrative figures. Dr. Mariam Jean Dreher, University of Maryland, summarized the conference. She also prepared for the Proceedings a summary of George McConkie's presentation on (1) language and knowledge and (2) the process of transforming linear language input into hierarchically structured knowledge.

We have put as much information from the Institute as we could into these Proceedings. We promised to mail each participant a copy, and we are glad we are able to make good on our promise, some three months later. We have also submitted the Proceedings to ERIC so that they will be available to a wider audience. Through such an Institute as ours and through these Proceedings we hope more teachers will gain additional information on how to teach their students to learn from text and that their students will benefit from such instruction and will improve in ability to learn from text.

Harry Singer
University of California, Riverside
July 18, 1983

Session I

Harry Singer

University of California, Riverside

Learning from Text Project

Description, Plans, and Results for 1981-1983

The Learning from Text Project, established and funded by the University of California (UC) and the California State University (CSU) systems, is co-chaired by Dean Deborah Hancock, CSUC Bakersfield, and Professor Harry Singer, UC Riverside. He is also the project's director. Dr. Tom Bean, CSU Fullerton, is associate director.

The project, which is entering its fourth year, is striving to attain its objective at two levels: university and high school. We shall relate our progress towards our objective at each level.

Learning from Text Objective: University Level

To improve students' achievement in general education and introductory courses by enhancing their ability to learn from text.

We define learning from text in the following way:

> Learning from text is a process in which learners mobilize their resources to interact with a text according to their changing purposes and the demands of the task. As a result of their interactions, they construct meaning for the text and new knowledge for themselves which they can store in long-term memory and retrieve for further cognitive processing or for encoding into oral or written responses.

Implementation of the Objective. To implement the project's objective, we have addressed four components that are interrelated in attainment of achievement in classroom settings.[1,2] These components and their interrelationships are depicted in the instructional model Figure 1.[3,4] Coherence occurs in the model when the instructor's objectives, learning abilities, purposes, materials (text or lecture) for satisfying these purposes and the test for assessing them are in agreement. The model shows that the instructor also influences the other three components and they in turn influence the instructor.

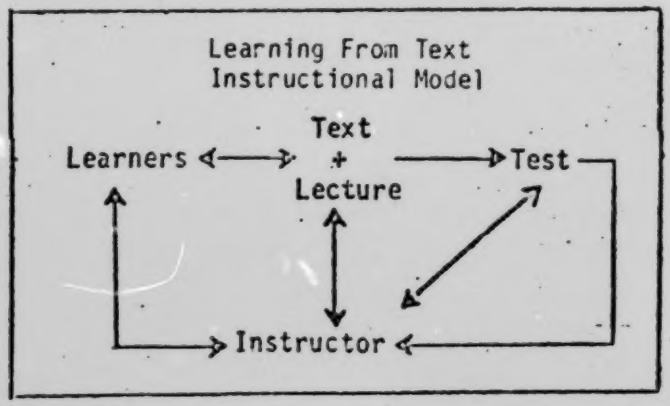

Fig. 1. Instructional model for Learning From Text showing interrelations among the model's major components. Each component represents a list of variables for instructional strategies, learner characteristics, text features, and types of tests. These variables are listed elsewhere.[5]

Background. In the project's first year we found that a common set of student characteristics determined achievement in both the UC and CSU systems. These characteristics were background knowledge (indexed by high school grade point average), attitudes towards learning (Carter Study Survey: Attitudes) and ability to learn from text (STEP: Reading).[6] Knowledge of student characteristics, particularly differences between good and poor learners from text, led us in the second year to stress classroom strategies on learning from text.[7]

Plans for Next Year. In the third year, we are addressing the remaining components: text characteristics[8,9,10] and test validity.[11] Specifically, we plan to design classroom situations that will maximize coherence among these factors. If this coherence increases student achievement in general education and introductory courses, we will have begun to satisfy our UC-CSU policy goal. We will then use this knowledge for faculty staff development, training of teachers and graduate assistants, and communication to learning assistance directors for use in freshman orientation (UCLA is already using LFT tests and knowledge generated by the Project in its orientation program and admissions policy).

Learning from Text Object II. High School Level

To improve students' ability to learn from text at the high school level so that they will be better prepared for college and improve their chances for success in university level instruction.

High School Project. Our associate director in cooperation with the project's director has been developing a model high school program in learning from text.[12] Last year, we trained a history teacher how to teach his students metacognitive processes, i.e. regulation and monitoring of their cognitive processes in learning from text, such as use of summarization and graphic organizer strategies. Next year we will have the history teacher use a QUEST[13] procedure (questions for stimulating thinking) that will teach students to construct concepts and formulate generalizations as they read, and we will expand the program to a teacher of science (biology) and perhaps mathematics. We also used a summer session model for inservice training of a group of high school teachers.

Both models are leading toward development of (a) a cadre of teachers who are improving high school students' ability to learn from text, (b) experience and knowledge on university-high school interactions that are successful in training teachers how to prepare students for university level instruction, and (c) school districts that can serve as prototypes for dissemination to other school districts throughout the state.

LFT Publications

We disseminate project information through technical reports, abstracts, and university publications.[14,15,16] The goal is to spread the effects of the Learning from Text Project as rapidly as possible to all segments of the university.

Although our project has a practical orientation, we nevertheless are gleaning some knowledge aobut learning from text. We have found that our

battery of tests (Sequential Test of Educational Progress: Reading; California Survey of Study Methods; Attitudes; and High School Grade Point Average) are better predictors of college freshman achievement in both UC and CSU systems than the battery in current use (Scholastic Aptitude Test and High School Grade Point Average).

Although college students are relatively good readers, they still vary in ability. When we contrasted students who were high vs. students who were low on the STEP: Reading Comprehension, we found they did not differ on cognitive processes, such as literal and inferential ability, that involved single steps to answer questions, but they did differ on complex questions that required multiple steps. In short, the difficulty was not in their cognitive, but in their metacognitive processes, their ability to direct, monitor, and control their cognitive processes (see reference 5 for a more detailed explanation).

Moreover, STEP Comprehension[17] correlates significantly with California Survey of Study Methods: Attitude.[18] This inventory scale assesses morale and confidence in the learning situation. For example, it asks such questions as:

Item		High Achiever Answer	
40.	Do you feel what is taught in your courses is just not worth learning?	YES	(NO)
60.	In some of your school subjects do you read more than is required?	(YES)	NO

Students whose morale and confidence are higher are likely to have a positive attitude about a school task and are more likely to persist in completing the task, especially when the task involves multiple steps for its solution in which the student must feel the answer to the first step is correct because that answer is needed for solving the next step, and so on to the final step in the task.

When the task is reading comprehension with a complex question to answer, the student must analyze the question, take the first part of the question, search the text for the answer, use the answer to help understand the next part of the question or as part of an inference for the second part of the question after searching the text for another part of the inference (a major or a minor premise), and then checking the conclusion reached against the multiple choice items and judging which item best fits the conclusion.

Background is also involved in this process. Frequently readers must call upon prior knowledge to comprehend a passage. For example, meanings for words in a comprehension passage depend upon construction of knowledge recalled from memory.

Thus, our three college level predictors interact to predict achievement ability (vocabulary knowledge, cognitive and metacognitive factors) as assessed by the STEP Test (Vocabulary and Comprehension), attitudes towards learning and self concept as a student, measured by CSSM, and background knowledge or previous achievement, as indexed by High School GPA.

Footnotes

1. Ernst Z. Rothkopf. Adjunct aids and the control of mathamagenic activities during purposeful reading. In Wayne Otto and Sandra White (Eds.), Reading Expository Material. New York, NY: Academic Press, 1982.

2. Harry Singer. Toward an instructional theory for learning from text: A discussion of Ernst Rothkopf's "Adjunct aids and the control of mathamegenic activities during purposeful reading." In Wayne Otto and Sandra White (Eds.), Reading Expository Material. New York, NY: Academic Press, 1982.

3. Harry Singer and Tom Bean (Eds.). Proceedings of the Lake Arrowhead Conference on Learning from Text, April 14-16, 1982. University of California, Riverside, Riverside, California: Learning from Text Project, 1982. ERIC ED 222 860.

4. Harry Singer. Relationship between ability to learn from text and achievement in the UC and CSU systems: Executive Summary. Technical Report No. 3. University of California, Riverside, California: Learning from Text Project, 1983.

5. Harry Singer and Tom Bean (Eds.), Learning from Text Project: Conceptualization, Prediction and Intervention. Final Report. University of California, Riverside, California: Learning from Text Project, 1982. ERIC ED 223 989.

6. Thomas W. Bean and Harry Singer. Predicting freshman achievement in the UC and CSU systems. California Reader, March/April 1983, 16(3), 29-32.

7. Thomas W. Bean and Harry Singer. Predicting freshman achievement in the UC and CSU systems. Technical Report No. 4. University of California, Riverside, California: Learning from Text Project, 1982.

8. Pat Phelps and Harry Singer. Text Selection. LFT Review, October 1982, 2(1), 1-13.

9. Thomas H. Anderson and Bonnie B. Armbruster, Content area textbooks. In R. C. Anderson, J. Osborn, and T. J. Tierney (Eds.), Learning to Read in American Schools: Basal Readers and Content Texts. (Conference Proceedings, Tarrytown, New York, February 1981). University of Illinois, Champaign, IL: Center for the Study of Reading, 1981.

10. Harry Singer and Tom Bean (Eds.). Lake Arrowhead Conference: Selection of Friendly Texts. University of California, Riverside, California: Learning from Text Project, 1983 (in preparation).

11. Bjorn Karlsen will conduct a learning from text project at CSU Sonoma State that will develop a prototype for a diagnostic criterion-referenced test.

12. Tom Bean, Harry Singer, Jack Sorter, and Charles Frazee. Acquisition of sumarization rules as a basis for question-generation in learning from expository text at the high school level. Technical Report No. 2. University of California Riverside: Learning from Text Project, 1982.

13. Harry Singer and Dan Donlan. Reading and Learning From Text. Boston: Little, Brown, 1980.

14. Dan Donlan, Harry Singer, and Carlos Cortes. The effect of diagrammed paragraphs on the comprehension and recall of history text among univesity students: An exploratory study. Technical Report No. 5, University of California, Riverside, California: Learning from Text Project, 1983.

15. LFT Abstracts. These abstracts are culled from some 10 to 15 journals listed and distributed three to four times a year by the project to some 120 people in the UC and CSU systems. They are currently prepared by Hallie Yopp and Ruth Nolte, research assistants in the project. UC and CSU professors who train teachers report these abstracts help them in their preservice and graduate courses.

16. Harry Singer. A century of landmarks in reading and learning from text: Research, theories, and instructional strategies. Technical Report No. 1. University of California, Riverside: Learning from Text Project, 1982.

17. Sequential Tests of Educational Progress (Copyright 1959 by Educational Test Service). Massachusetts: Addison-Wesley Publishing Company.

18. California Survey of Study Methods. Monterey, California: CTB/McGraw Hill, 1957.

Irene Athey

Rutgers University

Influence of Affective Factors on Reading Achievement

Dr. Singer asked me to pick up and elaborate on his remarks about the influence of interest in reading achievement, and I am happy to do that, since I have been involved for a good many years in exploring the role of what have come to be known collectively, and somewhat imprecisely, as "affective factors." In particular, I have wondered about the origin of interests, how they parallel cognitive and social development and what they have to do with reading.

Psychologists, as you know, are interested in accounting for the variance in people, in explaining 100% of those differences that lie below the normal curve on any human attribute. Obviously, the more variance a factor can account for, the more significant it is in contributing to those differences. In the case of height, for example, genes and nutrition would account for a large part of the variance, both singly and together.

In his paper, Harry mentioned the work of Jack Holmes, originator of the work on the substrata-factor theory of reading, and sometime mentor to us both. In many respects, Jack Holmes was ahead of his time, and much of his thinking is only now beginning to be appreciated. The theory was quite complex, incorporating a psychological, a statistical, and a neurological model, but in essence it was beautifully simple. The basic proposition was that there are many ways to accomplish the same task. Different individuals, or the same individual at different times, mobilize the capacities and resources at their disposal in order to achieve a goal or cope with a problem. In the case of reading, two people achieving at the same level may be achieving at the same level by mobilizing very different constellations of abilities.

Factors that contribute to the variance in reading include such things as intelligence, background information, and vocabulary, but together these factors account for only about 75% of the variance. Holmes thought that motivational and affective factors might be among those responsible for the unexplained 25%, yet such factors never appeared in the regression equations generated by his data. I once asked him how much variance he thought affective factors do contribute. He replied, "Probably about 5%." Then, after a pause, he added, "But it's a damned important 5%." I have to admit that the idea of one percent of variance being any more important than another was a new one to me. Statistically, of course, it makes no sense; psychologically, it may be of major significance.

I tried to force the issue to some extent in my dissertation where I took the raw data from an earlier study, in which the author had correlated the subscales of a specially designed personality measure with reading achievement in junior high school students, and found the correlations to hover consistently around zero. I conducted an item analysis of the scale to determine which of the items significantly differentiated between good and poor readers. By discarding those that did not and factor analyzing those that did, I was able to build new scales with good reliability. In examining the items that composed each factor, I found that the new scales reflected self concept, independence from family, and faith in the ability to make personal decisions. Rescoring the subjects on these new scales and computing their correlations with reading achievement, I found that the new measure yielded about 22 percent of the variance, as opposed to zero percent in the earlier study. Subsequently, I cross-validated these findings on new samples of junior high school students with the same result

The moral of this story is that the amount of variance you obtain is sometimes a function of the measures you use. Also, that you cannot dismiss a factor just because it does not show up in a regression equation.

I recently attended a preconvention gathering on the Queen Mary at which I heard Richard Anderson report on some research he and his colleagues have conducted at the Center for the Study of Reading at the University of Illinois. Anderson believes that researchers and teachers have been led astray by the volume of readability research into believing that a large amount of variance in reading performance can be explained by the readability of the passages read. Readability in these contexts is usually defined by the average length of the sentences and the number of difficult words in the passage. If this definition is correct, substituting up to one-third of the content of a passage with more difficult synonyms should have massive effects on reading performance; yet Anderson and Freebody found barely significant differences. Vocabulary effects too were barely detectable; but on a free recall test, knowledge or familiarity with the material showed large effects.

In fact, the dominating effect seems not to be vocabulary, as previously thought, but familiarity and interest. Vocabulary difficulty is, in reality, a proxy for conceptual understanding, i.e., being familiar with the subject matter.

In practice, it is quite difficult to separate out familiarity and interestingness of the material, but where this has been done, as in studies by Estes and Vaughan and by Asher, interest seems to carry the day. For example, Anderson conducted a study in which sentences with high familiarity/low interest were compared with sentences of high interest/low familiarity. He prepared sentences that adults judged to be interesting to children, and found that, even when the vocabulary in these sentences was quite difficult, the sentences were understood and remembered much better than easy, familiar, but dull sentences. In fact, the harder the sentence, the better the recall, showing the powerful capacity of interest to override difficulty. In all the experiments conducted by this group, readability was found to be negatively related to performance and also to interest. In one experiment, interest accounted for 33 times as much variance as readability.

Anderson asks what makes anything, but especially reading material, interesting to children, and answers his own question by postulating that it should relate closely to the self, to life themes, to action and to novelty. Indeed, this hypothesis does reflect the findings I cited earlier from my own dissertation. If material contains themes with which the child can identify, that foster or in some way contribute to the development of the schema of the self as an active, independent person, it touches the child's value system. It is this value system that is the source, the well-spring, of interest.

I have often wondered why the books that are intended for children's leisure reading are so different from the basal readers they read in school. If I were to give you an unsorted pile containing both kinds of books, you would have no difficulty placing them in the correct category. The answer seems to be that authors of children's books, if they are to make a living, must pay attention to children's interests. Basal readers, on the other hand, must appeal to teachers, and teachers are interested in the readability of the

material as computed by conventional measures. Publishers, of course, are interested in giving teachers what they want. That is why we have the school textbooks we have.

If learning from text is to occur, texts must relate to students' interests. Remember, there is still a substantial portion of the variance in reading performance that we cannot explain through academic and intellectual factors. I think we are on the right track in pursuing interests and value systems. Jack Holmes was right. Even if they don't show up on statistical tests, their contribution is "damned important."

A Context for Considering Learning from Text: Summary of George McConkie's Presentation

Mariam Jean Dreher

University of Maryland, College Park

The purpose of George McConkie's presentation at the Learning from Test Institute was to provide a theoretical background for thinking about comprehension and learning from text. In particular, his aim was to provide a context for viewing specific learning from text strategies discussed by other Institute participants.

His talk began with a discussion of the nature of knowledge. He then moved to a discussion of how knowledge is communicated in language, and the demands readers face in order to acquire knowledge from language. McConkie ended with suggestions for improvement of learning from text by improving both authors' practices and students' strategies.

McConkie emphasized the relational nature of knowledge. Knowledge is organized into categories, relations are formed among categories, and abstract structures which organize masses of knowledge are formed. These abstract knowledge structures, called frames or schemata, provide mental economy by enabling us to handle complex information as a unit. These structures are complex networks of relationships describing the typical characteristics of a particular action, event, object, or sequence. Comprehension occurs by finding existing knowledge structures that can account for, or be modified to account for, incoming information. Incoming information can thus be linked to prior knowledge about a "class" of information which has been accumulated in the knowledge structure. Using this accumulated information, inferences can then be made about the new instance.

Knowledge structures are complex networks. However, when knowledge is communicated through language, it cannot be presented as a whole. Language is linear. Therefore, a complex knowledge structure, which has no beginning or

end, must be expressed piece by piece. Readers must take the linear descriptions of relationships and reconstruct the non-linear knowledge network.

Learning from text strategies help readers decide how to take the linearized knowledge presented in text, and piece it back together in order to comprehend it. Without appropriate strategies many students do not succeed in constructing integrated networks from materials they read. Students often memorize lists rather than forming cognitive networks. Yet networks, since they include relationships, convey more information and are more powerful than lists.

What can be done to improve students' ability to construct relational knowledge networks from linearly expressed texts? McConkie defined two approaches: (1) what authors can do, and (2) what readers -- and their teachers -- can do. First, authors can help define the nature of what is being communicated by providing "instructions to the mind" on how to put the presented information together. For example, authors can use metadiscourse, or comments on the structure, such as "Three causes are . . ." or "The important thing to remember is . . .." Similarly, content can be expressed more coherently. For example, analyses of social studies texts often indicate that passages merely list facts. Little attempt is made to provide clues to constructing a knowledge network. Secondly, readers can be taught strategies to assist them in constructing knowledge networks. Since research in educational and cognitive psychology indicates that activities such as reorganizing, categorizing, and elaborating facilitate learning, McConkie suggested that teachers teach students to use such activities to restructure information. By restructuring information, as in making graphic organizers and outlining, students can clarify what they want to learn. Teachers can use modeling to demonstrate appropriate learning from text behavior. In addition, they can use tasks that require the target behavior

so that students learn to engage in appropriate activities.

In summary, McConkie discussed the nature of knowledge, and how knowledge is communicated in language. He then discussed the problems for readers that result from the way knowledge is communicated in language, how poorly written text can make the problems worse, and what authors and teachers can do to make a readers' job easier.

Session IIB

Avon Crismore
Center for the Study of Reading
University of Illinois

Interpersonal and ideational metadiscourse in learning from text

During a recent tour of the engine room on the Queen Mary at Long Beach, I noticed a sign at the top of the stairs leading down to the machinery with the words: Mind Your Footing. I was struck with the relevance of that sign for learning from text, since Mind Your Footing is equally appropriate for authors and users of instructional materials. The purpose of this paper is to clarify what I mean by the text characteristic, metadiscourse, as footing and why it is an important factor in learning from text.

Previous presenters drew the big picture for us in learning from text, presenting predictors of achievement, the connections between the affective and cognitive domains, the psychological foundations for the presentations to follow, and explanations of how these all fit together. We have already heard about the nature and acquisition of knowledge, the conveying of knowledge through language, the readers' tasks in understanding categories and relationships between categories, and the possible reasons for breakdowns in the learning process.

The presenters to follow will propose various strategies to help students see the categories of ideas and relationships between the ideas. These strategies include summarization, graphic organizers, cognitive mapping, diagrammed paragraphs and judgments of idea importance. There is no doubt that all these notions and strategies address the issue of learning from texts more effectively. But it is clear that the emphasis is on content--on ideas and the relationships between ideas. As important as ideas are, though, they are only one aspect of learning from texts. The way a text is written--especially the presentation of author attitudes about the ideas and relationships between author and learner--in addition to the presentation of ideas and relationships between ideas--can also influence learning from text. Examining this text presentation factor involves the roles of language in conveying both knowledge and attitudes, the roles of propositions, and the role of metadiscourse as footing.

Language, Proposition, and Metadiscourse Roles

Language, according to Halliday (1973; 1975; 1978) has three principal components or roles: (1) the ideational is concerned with expressing the phenomena of the external world and those of consciousness--and the logical relations deducible from them; (2) the interpersonal expresses the authors'/learners' roles in the discourse situation--the personal commitment, attitudes, and interaction with others; (3) the textual is concerned with the creation of text--it expresses the structure of information, the relation of each part of the discourse to the whole and to the setting, and the relation of author to content and reader. The first component, the ideational, can be seen as having an informative function: to convey new information--to communicate content regarded by the author as unknown to the learner. This function is emphasized by adults and dominates their conception of the role of language. Adults tend to be skeptical if it is suggested the language has other roles, yet for children the informative function is a minor function and late to emerge. Children tend to emphasize the interpersonal, interactional, social function of language. The danger is that authors who create instructional texts may have an image of language that is narrower and less rich than it should be, seeing the ideational as the relevant role and the interpersonal as the irrelevant role, and thus inhibiting learning from text.

There are also different roles that propositions play. These roles are: (1) stating ideas, (2) stating relationships between ideas, (3) stating the

relative importance of ideas, (4) commenting on the ideas, and (5) commenting on the act of discoursing. Some propositions, then, are content propositions and some are content-less. The content propositions are embedded in the content-less propositions called metadiscourse propositions. These content-less propositions provide both a context and support or footing for the content propositions. They also provide the alignment or footing between author and content and between author and learner in the sense used by Goffman (1981).

The Nature of Metadiscourse

Metadiscourse has been defined by Williams (1981a; 1981b):

> "...writing that guides the reader [distinguished from], writing that informs the reader about primary topics...discourse about discourse" (p. 47a).

and in another

> Writing about writing, whatever does not refer to the subject matter being addressed. This includes all connecting devices such as therefore, however, for example, in the first place; all comments about the author's attitude: I believe, in my opinion, let me also point out; all comments about the writer's confidence in his following assertion: most people believe, it is widely assumed, allegedly; references to the audience: as you can see, you will find that, consider now the problem of...(p. 212b)

He points out that every text, regardless of its ideational content, is produced by an author:

> ...Sometimes the author speaks in the first person and refers directly to the discourse as he constructs it, sometimes including even the audience as a specifically mentioned you. (p.195f)

And points out also that there are reasons why an author would want to use metadiscourse:

> The advantages of metadiscourse are that it allows authors to make these kinds of announcements to the readers:
>
> 1. Changing the subject (Let us now turn to...)
> 2. Coming to a conclusion (In conclusion...)
> 3. Asserting something with or without certainty (Surely, probably)
> 4. Pointing out an important idea (It is important to note...)
> 5. Defining a term (By x, I mean...)
> 6. Acknowledging a difficult line of thought (This is a difficult notion...)
> 7. Noting the existence of a reader (You will remember that...)
> 8. Indicating cause or other relationships between ideas such contrast (thus, but)

9. Continuing the discourse (at least, second)

10. Expressing an attitude toward an event (interestingly...) (p. a)

The definitions and examples suggest that: (1) metadiscourse, the author's discoursing about the discourse, can be classified into two types, informational and attitudinal. Informational metadiscourse directs readers how to understand the primary message by referring to its content and structure or the author's purposes or goals. Attitudinal metadiscourse directs readers how to understand the author's perspective or stance toward the content or structure of the primary discourse. And that (2) learners might benefit from authors who skillfully use metadiscourse in addition to primary discourse in instructional texts.

Metadisourse Use in Instructional Texts

Instructional texts, however, do not usually include much metadiscourse of either type. Content area textbooks and workbooks, especially in the early grades, are encyclopedic in nature and their structure is a list structure. Students are asked to read lists in their texts and then write lists in the workbook exercises that accompany the texts. No top level macroproposition exists for a unit, chapter, or lesson, and if there are higher level propositions, they are embedded in headings and titles rather than explicitly stated in the text. Authors of instructional texts also seem to assume students have reasons for knowing the content and have questions in mind, seeing the text as answers to those questions. Therefore, authors do not explicitly tell students of the significance of the text for them, or if they do, they do not mention it soon enough.

Davison (1981) analyzed adapted texts based on the use of readability formulas and found that adapters removed parts that they considered extraneous to the primary discourse--the metadiscourse propositions with the authors' point of view, beliefs, thoughts or feelings about the content. But as Davison suggests, references to the authors' thoughts and feelings help the reader identify with the text and make it more vivid and easily comprehended. Thus, the removal of interpersonal, attitudinal metadiscourse interferes with author-reader relationships and also deprives unskilled readers from learning to distinguish fact from opinion.

A recent study corroborates Davison's findings with adapted texts. I analyzed nine school social science texts and nine nonschool social science texts to determine the types and amounts of each type of metadiscourse. Results of the analysis indicated that nontextbooks used more informational metadiscourse than did textbooks, but the differences were not large. However, nontextbooks used almost twice as much attitudinal metadiscourse as did textboks, as can be seen in Table 1. See also examples of these texts in the appendix.

Three Approaches to Increase Learning from Texts

If one asks how to improve a learner's ability to get information from texts when the learning process breaks down, there are several approaches possible. One approach is to work with the learner's motivation, persistence, prior knowledge development and strategies such as mapping, outlining, and graphic organizers. Another approach is to work with the text to improve the quality of ideas represented in the primary discourse, making sure that the

ideas are clearly expressed and explained, adequately elaborated, and well-structured, organized, and arranged; and that the relationships between ideas are explicitly signaled.

A third approach is to improve texts not only ideationally but also interpersonally with metadiscourse footings for support and alignment by using: (1) informational metadiscourse where the author comments to the reader about the controlling, top-level propositions, the significance of text to the author and reader, and the author's plans and goals; gives previews, updates, and summaries to the reader; and shares thought processes; and (2) attitudinal metadiscourse where the author comments about beliefs, attitudes, and opinions concerning the content. Closely allied to the use of these two types of metadiscourse as footing for learners is the use of language by authors in such a way that the voice or persona in the text makes an appropriate interpersonal relationship between author and reader possible.

Dillon (forthcoming) sees five dimensions to interpersonal footing in texts that authors and readers need to consider:

impersonal--personal

distant--solidary (meets Positive Face Wants)

superior, authoritative--equal, limited (respects Negative Face Wants)

formal--informal

oblique--direct, confrontive

Gibson (1969) also discusses and illustrates the possible relationships between author and reader and in addition, author and subject matter relationships that give a text its voice and tone.

An author's use of the interpersonal I, you, and we device builds a solidary intimate footing. Other language devices make author intention and author-subject matter relationships explicit, all of which help make reading the text a personal experience for the learner. The author's task in this approach is to "mind your footings"--both ideational and interpersonal. The learner's task is the same--"mind your footings," by noticing, responding, and adapting to the footings and shifts in footing throughout the text.

Advantages of an Interpersonal Approach

There are sveral reasons why learning from text requires that authors and readers approach texts interpersonally as well as ideationally.

(1) Learners will not be shut out from the text at the beginning. An interpersonal approach provides easy entry into the text, continuation through the text, and motivation for rereading and rethinking. Solidarity is enhanced since author and reader status roles are more often equal rather than authoritative versus subordinate. Author-reader footings can then become personal, solidary, equal, informal and direct when appropriate, rather than consistently impersonal, distant, superior, formal, and oblique.

(2) Learners will recall more and have a greater sense of metacognitive control. If they identify with the author, it is reasonable to assume they will adopt better strategies (for instance), the strategies used by an author who explicitly expresses them. Evidence that this actually happens comes from a recent investigation of author-reader relationship and its effect on comprehension (Tierney, LaZansky, Raphael, & Cohen, in press).

(3) Learners will become critical readers, developing their own opinions as they read the text evaluatively. They will see the author's stance and biases and not be so willing to accept ideas just because they are in print. They will be better able to judge the quality of the claims, argumentation, and evidence.

In conclusion, it is not enough to emphasize the ideational: the knowledge structures of ideas, the knowledge structure of texts, and textual aids. These are important concerns and they require further study if we want to better understand learning from text. But we also need to investigate the non-ideational, content-less, interpersonal aspects of texts.

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Table 1

Informational and Attitudinal and Total Metadiscourse Use for all Social Science Texts

Text Type	Total[a] Words	Metadiscourse Type (with frequency per 1000 words) Informational	Attitudinal	Total Metadiscourse
Textbooks	129,000	1.17	.81	1.98
Nontextbooks	77,000	1.85	4.32	6.17
Typical textbooks	82,000	.55	.78	1.33
Typical nontextbooks	66,000	.47	3.70	4.17
Atypical textbooks	47,000	2.26	.85	3.11
Atypical nontextbooks	11,000	10,18	8.09	18.27
All typical texts	148,000	.51	2.08	2.59
All atypical texts	58,000	3.76	2.22	5.98
Typical textbooks	82,000	.55	.78	1.33
Atypical textbooks	47,000	2.26	.85	3.11
Typical nontextbooks	66,000	.47	3.70	4.17
Atypical nontextbooks	11,000	10.18	8.09	18.27

[a] approximate

Appendix to

Avon Crismore's Paper

A TYPICAL SOCIAL STUDIES NON-TEXTBOOK

In this work, however, I wished to regard the subject from an altogether different point of view. Immigration altered America. But it also altered the immigrants. And it is the effect upon the newcomers of their arduous transplanation that I have tried to study.

My theme is emigration as the central experience of a great many human beings. I shall touch upon broken homes, interruptions of a familiar life, separation from known surroundings, the becoming a foreigner and ceasing to belong. These are the aspects of alienation; and seen from the perspective of the individual received rather than of the receiving society, the history of immigration is a history of alienation and its consequences.

I have tried historically to trace the impact of separation of the disruption in the lives and work of people who left one world to adjust to a new. These are the bleaker pages of our history. For the effect of the transfer was harsher upon the people than upon the society they entered.

No one moves without sampling something of the immigrants' experience--mountainers to Detroit, Okies to California, even men fixed in space but alienated from their culture by unpopular ideas or tastes. But the immigrants' alienation was more complete, more continuous, and more persistent. Understanding of their reactions in that exposed state may throw light on the problems of all those whom the modern world somehow uproots.

Oscar Hanlon - The Uprooted

A TYPICAL SOCIAL STUDIES TEXTBOOK

MEXICAN AMERICANS TODAY. Many descendants of the first settlers in the Southwest are still there. They have been joined by later arrivals from Mexico. Today, 70% of Mexican Americans live in Texas and California.

Like many minority groups, Mexican Americans (Chicanos) have had difficulty getting good jobs, housing, and education. One serious problem is the language difference. It is hard for Spanish-speaking students to learn in English-speaking schools.

The League of United Latin American Citizens (LULAC) was organized in 1928 to help Chicanos learn English. In 1970, Jose Angel Gutierrez founded LaRaza Unida. Both groups work for Chicano progress in jobs, housing, and education.

EARLY DAYS IN OKLAHOMA

Indians forced out of settled areas had to go somewhere. So the government set aside Oklahoma as an Indian territory. It was given to the Five Tribes from the South for "as long as grass shall grow."

Then after the Civil War, the government gave the western part of the Territory to other tribes brought from farther west. Some of them were the Kiowa, Comanche, Ponca, Cheyenne, Arapaho, and Nez Perce.

But reservations--in Oklahoma or other places--were usually so bad that no one would want to live there. Housing, education, and medical care were poor. Often, the soil would not grow much food. The Indians were usually not allowed to hunt. So they had to depend on government supplies which often did nto come. Many Indians became ill and discouraged. Little Wold, a Cheyenne, said: "We have been south and suffered a great deal down there. Many have died . . . Our hearts have looked and longed for this country where we were born."

But even Oklahoma was taken away. Whites had wanted to settle there for years. In 1889, the government gave in and let settlers in. Oklahoma became a state 18 years later, and the Indians were forgotten.

(Geography consultants)

Herbert H. Gross, Phillip Bacon

Follett Social Studies - Exploring Our World, The Americas

(Authors): Herbert H. Gross, Dwight W. Follett, Robert E. Gabler, William L. Burton, Ben F. Ahlschwede.

AN ATYPICAL SOCIAL STUDIES TEXTBOOK--PREFACE

The purpose of this curriculum unit is to enrich the way its readers think about Ameraican Indians. The first chapter discusses the kinds of ideas people have of other groups of people. We believe that many Americans have an out-of-date and inaccurate picture of Indians. One way to change and broaden that picture is to understand more deeply both the past and present of America's Indians, and that is our goal in this book. We do this partly by exploring the past of a group of Indians who lived from about 500 B.C. to 1300 A.D. in the Saginaw Valley in Michigan. We can thus understand one of the many ways of life of America's Indians, and trace the development and change in that pattern through to the white occupation of America. We then explore the time of violent and destructive change of Indian civilization which occurred when Europeans came to America and, over time, settled the land from the Atlantic to the Pacific. The last chapter attempts to show the way of life and problems of some present-day Indians. The place that Indians and other minorities have and will have in our nation is now being considered anew and the ways in which we see the past will play an important role in determining the future. If in working through this book, readers begin to see America's Indian minority in new ways, we will be satisfied (p. ii 3).

Today few would agree with the views of that article quoted above, but stereotypes still affect too often the ways in which we see Indian Americans. Let's look at a modern day example of the effects of stereotypes. Presented first is a description of the background of the situation (p. ii 4).

This is our goal in this book. We want to look at the prehistory of Indian culture in America to see the ways in which Indian peoples learned to exploit the land in which they lived. We want to look at the course of Indian-white relations in America to explore what happened when a stone-age culture faced an acquisitive white culture that was more highly developed and had more resources than did Indian culture. We want also to examine the legacy of this contact which in large part has led to the problems of Indians today. We cannot understand the present without the past, and we cannot understand either unless we try to see more clearly than before (p. ii 5)

(Ian and Susan Westburg - Indians in the American System: Past and Present)

AN ATYPICAL SOCIAL STUDIES TEXTBOOK - CHAPTER 1

HOW DO YOU SEE INDIANS?

On a fall day a couple of years ago we were walking in some woods near our home when our son, then four years old, asked us whether there were any "wild Indians" there. We didn't say "no," but instead asked him what a "wild Indian" was. He could not answer us, but what did he mean by "wild Indian," and what was a "wild Indian?" He knew what wild animals were, and we wondered whether he might have thought that there were "wild Indians" similar to wild animals. If this was what he was trying to say, what kind of picture of America's Indians did he have? We had no way of getting the answer to this from our son, but his remark was disturbing because it showed how stereotyped his conception of the Indians was.

This incident is not important for its own sake, but for what it tells us about the ways many white Americans think about Indian Americans. How many of us see Indian Americans in ways that are not very different from the way our four-year old did? And, if we do, what does that mean? Here are the associations of some high school juniors to the following terms?

"WHITE SETTLERS"

forts, John Wayne, pioneers, rifles, greed, cowboys, wagon trail, misunderstanding, sheriff, war, cattle, slaughter, cavalry

"RED INDIANS"

peace pipe, feathers, tribes, hunters, reservations, bow and arrow, warriors, proud, tomahawk, scalp, bison, trail of tears, tee-pee, brave, firewater, ornamentation*

---

*Responses of students at Laboratory School, University of Chicago. Courtesy of Mr. Edward Bernstein.

The students' picture of America's white settlers is obviously wildly inaccurate. We can laugh at ourselves for thinking even for a moment that the Americans who settled the West all looked and acted like John Wayne movies. By looking critically also at this picture of America's Indians, we can point out the places where (p. 1)

(Ian and Susan Westbury - Indians in the American System: Past and Present - Student Book)

Session IIIA

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Presentation was based on Acquisition of Summarization Rules as a Basis for Question Generation in Learning from Expository Text at the High School Level[1]

[1]This report has also been distributed as Technical Report No. 2, Learning from Text Project, University of California, Riverside, 1983. Its co-authors are Tom Bean, Harry Singer, Jack Sorter, and Charles Frazee.

Acquisition of Summarization Rules as a Basis for Question Generation in Learning from Expository Text at the High School Level[1]

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[1]This study was funded in part through a grant from the University of California and California State University Learning from Text Project. The authors would like to thank the Systemwide Joint Steering Committee for its continuing support. We gratefully acknowledge the assistance of our research assistant, Greg Loomis, for his efforts in scoring and analysis of the summary protocols. We especially want to thank the students in Jack Sorter's World History class for their participation and insights. This paper was presented at the National Reading Conference, Clearwater, Florida, December, 1982 and is to appear in J. Niles and L. Harris (Eds.), Thirty-second Yearbook of the National Reading Conference. Rochester, NY: The National Reading Conference, 1983.

Metamemorial processes, such as summarization and self-generated questioning strategies, can be used for spontaneous selection and transfer of information into long term memory (Flavell and Wellman, 1977). The question we have posed for this study is whether instruction in summarization rules and self-generated questioning can enhance comprehension of expository material.

Review of Research

Ann Brown (1981) found that summarization was a late developing metacognitive process amenable to direct instruction at the secondary and college levels. Brown's talk-aloud protocols of college rhetoric and journalism instructors suggest that summary writing is governed by internalized rules that closely parallel van Dijk and Kintsch (1977), Kintsch and van Dijk (1978), and Kintsch's (1982) macro-rules for text comprehension. They postulated three major rules that seem to underlie a reader's abstract reconstruction and subsequent recall of a text's gist: 1) deletion of trivial or redundant propositions; 2) generalizations subsuming subordinate propositions; and, 3) construction of an abstract, schema-driven text base in memory. Based on experts talk-aloud protocols and Kintsch and van Dijk's macrorules, Day (1980) devised summarization rules and explored their efficacy with average and remedial junior college students. She found that average students required less explicit instruction in summary rules than a remedial group who needed a training routine that involved rules plus corrective feedback for effective summarization.

The important finding in both Brown's and Day's work is that summarization is a rule-governed process amenable to direct instruction. However, they did not determine whether this training would in fact improve text comprehension. In our study, we sought to use summarization training as a basis for student-generated questions on expository text. In a previous study, Singer and Donlan (1982) demonstrated that secondary students could generate story specific questions after training in a generic scheme for asking questions of narrative text. They found that eleventh graders trained in this procedure achieved significantly higher comprehension scores than a control group responding to traditional, teacher-posed pre-questions.

However, contemporary expository texts contrast with narrative texts because expository texts typically employ a variety of rhetorical patterns. For example, a world history text may shift from a narrative essay to a standard chronological survey pattern within the same chapter. Unlike a story, expository text varies patterns, limiting the use of any single, generic question guide.

Knowledge has been gleaned on training in self-questioning with narrative material (Singer, 1978; Singer and Donlan, 1982) but much less is known about how to instruct students in question-asking with expository text. Moreover, few long-range studies paralleling the Singer and Donlan study have been conducted with high school students. A study completed by Andre and Anderson (1978-79) explored the effects of a two-day self-questioning training scheme on high school students' comprehension of brief passages from psychology. They found that

student-generated questions enhanced low and middle verbal ability students' comprehension of the material. Higher verbal ability students not trained in the question-generation procedure performed as well as the experimental group. Apparently high verbal ability students managed their study reading effectively, perhaps because they had already acquired appropriate strategies for processing materials that was relatively easy for them. Thus, comprehension is a function not only of reader resources but also of their interaction with text characteristics.

Analysis of Text Types

Text types vary in familiarity and ease of processing. Stories have a familiar, predictable structure acquired early in or prior to the elementary grades (Dreher and Singer, 1980). This internalized structure forms a good foundation for student-generated questions. In contrast expository texts employ a variety of rhetorical structures including narration, compare-contrast, cause-effect and combinations of these. This variety is especially true of contemporary social studies texts that include social history materials designed to make the text more comprehensible to the reader. Given the combination of diverse macrostructures within a single text, which generic structure should be used to train students in question asking? In our solution to this problem we used a summarization strategy as a prelude to question asking because a summarization strategy could be applicable to any type of rhetorical structure. Since students must know

something in order to generate questions (Miyake and Norman, 1979; Singer and Donlan, 1982), we taught our experimental students summarization rules and expected they would draw upon these rules for generating questions for their expository texts.

Design

Materials and Procedures

Based on Kintsch and van Dijk's macro-rules and Day's summarization training procedure, we devised a five step strategy for summarizing and generating questions related to expository material. The five steps were: 1) Selection: Write a topic sentence that organizes all the ideas in this section of the chapter; 2) Invention: If there is no clear topic sentence, invent your own; 3) Generalization: Write a statement that organizes the ideas in this section; 4) Questions: Write up to three questions based on the general statement; and 5) Conclusion and Evaluation: Write the position you support and, if possible, how you might test the truth of this position.

The strategy steps were copied in a worksheet format for student use. After the first few sessions, steps one and two were combined since few students invented their own topic sentences. Inventing topic sentences is rarely necessary if the material is well written.

Students in the experimental group of our study applied this strategy to their world history text, Echoes of Time: A World History

(Ostrowski and Kemper, 1977). The text has an average readability rating of 10th grade (Raygor, 1977) and features interspersed questions every few pages. The questions are in small print, single-spaced and therefore largely ignored by most students. The text uses narrative social history to spice-up more traditional expository patterns that chronicle, compare, and contrast events. Students in our experimental group used the summarization-questioning strategy on two chapters consisting of four lessons each describing Greek and Roman civilizations. They read copies of the text that masked-out existing interspersed questions. A control group responded to teacher-posed questions in a traditional read and discuss classroom dialogue.

Two dependent measures were employed: 1) multiple-choice quizzes measuring students' explicit comprehension of text information; and 2) a delayed summarization task designed to assess students' productive organization of text ideas.

Students in both groups completed eight teacher devised multiple choice quizzes on Greece and Rome. Each quiz consisted of 20 text explicit items with an average of seven macro-level questions and 13 micro-level items. Two preliminary quizzes on the introductory chapter provided baseline data before the experimental strategy was introduced in the chapter on Greece. Quiz eight was given after the strategy was phased-out. Students were expected to apply the strategy independently in studying the text for this quiz.

Subjects

Fifty-eight 10th grade students enrolled in two sections of an honors world history at Garden Grove High School partipated in the study. They comprised a matched group of students based on a Fall, 1982 adminstration of the Sequential Test of Educational Progress, Series II, Form A (1971) to 54 students appraising vocabulary and comprehension of content material. Students in the experimental group achieved a mean of 38.23 with a standard deviation of 6.20. Control group students averaged 41.42 with a standard deviation of 7.87. The difference between these groups was not statistically significant (t (52) = 1.64). Both classes consisted of average and above average students scoring equally well on a standardized measure of reading achievement.

Results

Students in the experimental group were introduced to the summarization-questioning strategy starting with the chapter on Greece. Two baseline quizzes on introductory chapter material were administered prior to introducing the strategy. Both groups simply read this material and discussed it in class. Means and standard deviation for these first two, baseline quizzes are displayed in Table 1.

Insert Table 1 here

On the first quiz, the control group students achieved a

significantly higher mean score than their experimental group peers based on a two-tailed t-test (t (55) = 2.32, $p<.05$). However, quiz two resulted in a non-significant t-value (t (56) = .57). The result on quiz two plus the comparisons on the STEP test made us confident that our two groups were equivalent.

The results for quizzes three through six on Greece are displayed in Table 2. The summarization-questioning strategy began with the opening lesson on Greece which comprised the content of quiz three.

Insert Table 2 here

Introduction of the summarization-questioning strategy resulted in significantly lower scores for the experimental group on quiz three concerning Classical Greece (t (55) = 3.24, $p<.01$). Both the teacher and students were trying this stratgegy for the first time on a new text chapter making this first lesson an initial learning trial. Thus, students were learning unfamiliar content using an unfamiliar strategy which probably accounts for this initial difference in quiz performance.

Both experimental and control students experienced difficulty with quiz four, but they achieved similar mean scores (t (56) = 1.11). On quizzes five and six, both groups displayed higher, but not significantly different mean scores (t (56) = .07, t (54) = .58).

Students used the summarization strategy again in chapter six on Rome. Results on quizzes seven and eight for the lesson on Rome

mirror previous scores with no significant differences in performance attributable to instruction in summarization-questioning (t (52) = .68) and (t (50) = .98).

One week after quiz eight, students in both groups were instructed to summarize an unfamiliar 300 word pasage from their text describing three major reasons for the onset of European exploration (i.e. adventure, religion, and trade). The passage consisted of a journalistic introduction with the key ideas starting at sentence eight foreshadowd by signal words such as "one reason," "a second reason" and so on. Students' summaries were first scored by the teacher using a scoring template that listed sentences and labeled them as "micro-level" or "macro-level" with assigned point values. There were 16 micro-level ideas worth one point each and four macro-level ideas worth five points for each of the three reasons for exploration, and 10 points for the umbrella sentences subsuming these reasons (i.e. "What motivated the European countries to explore and expand their horizons?").

After the teacher's scores were compiled, a graduate student blind scored the protocols. The interrater reliablity coefficient for the teacher and graduate student's scores was .85. The more conservative blind scoring was used for subsequent analysis.

Twenty-seven students in each class completed the summary task. There was no significant difference between the experimental and control in presence of ideas from the passage. Both groups were adept at selecting the three key ideas and supporting details. The

experimental groups achieved a mean of 24.29 with a standard deviation of 4.08 and the control groups scored 24.79 with a standard deviation of 4.27 (t (52) = .43).

Although information selected and presented by both groups included the major reasons for European exploration, the group trained in summarization rules produced more succinct summaries. Treating length of summary as a measure of terseness, there was a significant difference between the two groups. The experimental group's mean summary length was 63.92 with a standard deviation of 15.31 and the control group mean was 77.70 with a standard deviation of 15.31 (t (52) = 2.86; $p<.01$).

Thus, while training in summarization did not make the experimental group's comprehension scores or their selection of key ideas (macropropositions and micropropositions) in a passage significantly different from the control group's, it did influence their ability to retrieve information from memory and express it in a succinct fashion. This finding confirmed our prediction that acquisition of summarization rules would enable students to express the knowledge gleaned from an expository text in a more terse manner than a control group could do.

Discussion

Previous studies have shown metacognitive training has facilitative effects on reproductive and productive knowledge (Andre, 1979). It is most effective for low achieving students (Andre and Anderson, 1978-79; Day, 1980). McNeil and Donant (1982) showed that a

representative sample of sixth graders could learn summarization rules and this knowledge was related to improved performance on an inferential comprehension test. The present study indicates that summarization training has a significant effect on average and above average eleventh grade students' ability to synthesize expository text and express it in a condensed form. This effect is best demonstrated not in multiple choice measures but in a summarization task that closely mirrors the training procedure.

We expected that summarization rules would form a knowledge base for student-generated questions from expository text. While interviews with students revealed a positive attitude toward the summarization portion of our strategy, they had a great deal of difficulty with the self-questioning step, perhaps because they were given the summarization questions and were, in effect, asked to generate additional questions. These questions were mostly content-specific. While they were interesting, for example, "How did Spartan parents feel about putting a deformed baby to death," their questions rarely related to the text explicit questions and answers required for success on the quizzes. However, the quizzes did have questions that were related to the information gleaned by the summarization rules.

We have three explanations for the lack of any significant difference between our experimental and control group on the series of comprehension tests: (1) The experimental group did not learn nor use the summarization rules. We reject this explanation because the data

we collected showed students in our experimental group were learning the rules and their free recall protocols were more succinctly written than the control groups. (2) The experimental and control groups had already developed summarization abilities or some alternative strategies prior to the eleventh grade that were equally successful for attaining comprehension. Although these explanations may account for performance on the multiple choice tests, they do not explain the difference on the recall protocols. (3) The evidence indicates that instruction in summarization rules enable the experimental group to be more adept in use of the rules. This adeptness was manifest, not on criterion-referenced tests, but on a task that was closer to the instructional treatment and more sensitive to the effects of the instruction: the recall protocols that revealed the experimental group wrote in a more succinct fashion.

Summary and Conclusion

Eleventh graders trained in summarization rules and self-generation of questions were not significanty different from a control group on a series of multiple choice comprehension tests covering material taught in a history class. However, the experimental group wrote significantly more succinct recall protocols at the end of the study. Therefore, the training appears to have enhanced the ability of the experimental group to organize and store information in memory and/or retrieve and express it in a more condensed form.

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Table 1

Quiz Results for Experimental and Control Groups

Before the Summarization-Questioning Treatment

Quiz	Content	Group	n	Mean	Standard Deviation
1	Introduction to History	Experimental	28	13.42	2.80
		Control	29	15.00	2.26
2	Introduction to History	Experimental	28	16.07	1.48
		Control	30	16.30	1.55

Table 2

Quiz Results for Experimental and Control Groups After Introducing the Summarization-Questioning Treatment

Quiz	Content	Group	n	Mean	Standard Deviation
3	Classical Greece	Experimental	28	14.50	2.09
		Control	29	16.31	2.10
4	Greek City-State	Experimental	28	13.35	2.07
		Control	30	14.10	2.94
5	International Rivalry	Experimental	28	15.92	2.69
		Control	30	15.86	3.21
6	Religion, Philosophy, Science & Literature	Experimental	28	18.00	2.07
		Control	28	17.67	2.01

APPENDIX TO TOM BEAN'S PAPER

Directions for Summarization

Two approaches are rule-governed (Kintsch & van Dijk, 1978; McNeil & Donant, 1982) and intuitive (Cunningham, Cunningham, & Arthur, 1981). In the rule-governed approach, these are the directions:

1. Put a line through all the statements that are not important to the story.
2. Put a line through all statements that repeat what has already been said.
3. Put a line under the topic sentence for this paragraph.
4. For paragraphs that do not have topic sentences, ask students to make up a topic sentence.

In the intuitive approach:

1. After showing the students the first of several paragraphs in passage, ask them to retell the paragraph in 20 words or less. Students dictate and edit as a group until they arrive at 20 words. Then they compare their summary with the passage. If they are satisfied, go on to the next stage.
2. Now show the second paragraph and ask students to retell both paragraphs in 20 words or less. Then have students compare their summary of both paragraphs. If they are satisfied go on to the next paragraph.
3. Then show the third paragraph and again restrict the group, asking them to retell all three paragraphs in 20 words or less.
4. Continue until all paragraphs have been involved in the 20 word summary.

W. Kintsch and T. A. van Dijk. Toward a model of text comprehension and production. Journal of Psychological Review, 1978, 85, 363-394.

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NAME_____

PERIOD___CHAPTER___PAGES_____

Directions: A) Before you begin, enter the time now. TIME NOW IS:_____

B) Read pages ____to____. Then, summarize what you read in your own words using the 50 spaces below. Your summary must not be longer than 50 words.

SUMMARY

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

C) When you are finished with your summary, enter the time. TIME NOW IS:_____

YOUR QUESTIONS & CONCLUSIONS

Steps:

1. SELECTION: Write a topic sentence or invention here.

_____

_____

2. GENERALIZATION: Write a statement that best organizes the information in the section.

_____

_____

_____

3. QUESTIONS: Wirte up to three (3) questions based on the above general statement.

1)_____

_____

2)_____

_____

3)_____

_____

4. CONCLUSIONS & EVALUATION:

POSITION: _____

_____

TEST: _____

_____

_____

_____

_____

_____

A STRATEGY FOR UNDERSTANDING INFORMATION FROM YOUR TEXT

STEPS

1. SELECTION: What is the topic sentence that organizes all the ideas in this section of the chapter? (If there is no clear topic sentence, INVENT your own).

2. LIST: Key ideas from this section of the chapter.

3. GENERALIZATION: What general statement or conlcusion can you make based on your understanding of the ideas in this section of the chapter?

THE AGE OF DISCOVERY[1]

What motivated the European countries to explore and expand their horizons?

One reason was the search for adventure. Europeans eagerly listened to and read tales about the journeys of travelers to the Orient, especially Marco Polo's overland trip to China in the Thirteenth Century. This stirred imaginations and desires for similar riches and glory.

A second reason was religion. Christianity in its first twelve centuries had already spread throughout Southern, Central, and Northern Europe. Then during the period of the Crusades, it had attempted to convert the Moslems in the Near East. Now, by the fifteenth century, Christian missionaries were looking for newareas of conversion and were beginning to turn their energies toward Africa and Asia.

A third and, probably, the strongest reason for European exploration was economic. There was a great demand in Europe for the silks and spices of the Far East, but the overland routes to the Orient were controlled by the Moslems. Whichever country found the shortest sea route would reap tremendous wealth from the resulting trade. Then too, there was the desire to find gold and silver and precious stones--all of which were in short supply in Europe.

[1]Ostrowski, R. & Kemper, J. Echoes of Time: A World History. New York, NY: McGraw-Hill, 1977.

Session III B

Charles Frazee
Learning from Text Project
California State University, Fullerton

A Text For High School History

A TEXT FOR HIGH SCHOOL HISTORY

Teaching history to high school students presents many challenges. An instructor must confront a classroom in which most students, reflecting the consensus of adult Americans, believe that the subject is unimportant. At best, history is seen to have entertainment value, but it is certainly not the kind of offering which will make them successful in business, presumably the driving motivation behind the education in today's pragmatic world.

Studies have shown that most people learn about world affairs from watching television, not from reading. To the extent that reporters and commentators often have to speak on the origins of a news happening so that it may be seen in context, they become historians. There are obvious limitations to this kind of history, since it must be presented in simplistic terms in a very limited period of time and is usually focused on how an event relates to the United States.

For this reason teaching World History in high school becomes extremely important. For millions of Americans this will be their only opportunity to ever consider the world in its complexity, both past and present. Choosing a text which will interest them is essential, since reading rather than listening demands greater effort. The qualities of this text require it to stir the imagination, challenge the intellect and impress the memory. In some ways it must present its material in the same way instruction in a foreign language is given. Historical vocabulary must be mastered--places, people, and events--as well as historical thinking, the grammar of the discipline.

Serious history teachers want to communicate the message that a knowledge of the past is a key to understanding the present. Illustrations noting the linkage must abound in both oral and written presentation so that historical learning is not undertaken in a vacuum. Selecting a text which has examples of how the past and present interlock is, in my opinion, essential for historical study and for making history useful and relevant.

Over the past several months I have examined texts and talked to students about their high school experience with history. Since World History is an elective in the California system about 20% of those I interviewed had never taken the course. The others universally complained that the instructor, usually a coach, had no interest in teaching the class, often failed to show up on time, and tested on isolated names and dates. The texts they believed to be out-dated (whatever that may mean) and universally bland and unexciting. For this reason I am convinced that a text in history must be better than usual, since it may very well have to make up for the deficiencies of the teacher.

For a text to do this, certain qualities are desirable. Among these are comprehensive coverage of a period, clarity of composition, a balance in the topics treated, good illustrations thoughtfully chosen, maps to aid in the location of places, and review questions at the end of the chapter.

All of the texts which I examined, following a traditional pattern, scored well on comprehensiveness. There has been a marked change in the approach to this discipline in recent years.

Formerly, World History meant the history of Western Europe with an accent on political and military events. This is no longer true. Authors of the volumes I consulted covered African, Asian and American Indian societies, some in great detail. Primitive societies get more attention than ever, indeed more than they deserve. Another shift has been towards social and cultural history. Art and architecture, behavioral patterns and social institutions are presented along with politics. No fault can be ascribed to the texts for failing to survey representative societies over a broad spectrum of human groups, both in the past and in the present. This is certainly a step forward.

Clarity of composition varies in the texts I surveyed. Some identified clarity with simplicity of prose and ideas. In one, the topic sentence, at the beginning of each paragraph, was printed in bold type. Numerous captions break up the text itself, and paragraphs hardly ever exceed five or six sentences. Some texts presented the structure of the composition in outline form before commencing the chapter itself. All concluded with a series of questions to guide the reader to recall the important places, persons and events. These learning devices are obviously based on good pedagogical grounds, following the dictum that "Repetition is the mother of studies."

My hesitation in completely endorsing this methodology springs from the suspicion that a student who has just left a course in creative writing or World Literature must surely find historians at a low level of accomplishment in literary skills. In avoiding complexity, the text become too simplistic.

Facts come at the reader with such rapidity and such abundance that the end product may be confusing even though the language is not. No one expects to find great literature in textbooks, but I fear that bright students, even average students, may well equate dull prose with a study of the past.

A balance of topics treated by the texts can be based on very subjective reasoning. Obviously, everyone who writes about ancient Greece must include a section on Sparta. But, what should be said about it? Here there can be agreement on certain basics, but disagreement on the treatment and approach. I found in the texts I surveyed that the events of ancient Greece were treated with great sympathy. All of the authors thought the ancient Greeks were wonderful and that the Persians were definitely "the bad guys." I have distributed three selections on the treatment of Sparta, for the sake of comparison. Only one adequately treats the distressing regimentation of its citizenry for what it was--sheer totalitarianism. The other authors appear to be more in awe than in repulsion to its form of government. I know that textbook authors have to please broad audiences which give them little opportunity to present the shading of events, but is it expecting too much to ask that totalitarianism, the greatest threat we have to our own society, be seen for what it was in the ancient world? Greek Society was very complex; it had a mixture of strengths and weaknesses. It appears to me that a text needs to point these out and to draw on illustrations which will enable the student to note that analogies with our own times are present.

I keep wanting the text to answer what must be in the student's mind, "Why should I know what Spartan life was like? How does it affect my world?"

In the text used in the class which Tom Bean is monitoring, the writers use long quotations from both ancient and modern authors to supplement their own composition.[1] In some ways this is admirable since it demonstrates how modern historians use original sources to construct their own analyses of the past. However, I found these sections disruptive since they were much too long, breaking into the text for several paragraphs, destroying the unity of the essay.

This same text gives a long list of the Hellenic gods and goddesses with a paragraph on each. While this is informative, it is hard to justify the prominence it receives. It may well encourage the student to see Greek religion as one more list of objects to memorize. An extended treatment on religion as a public affair--so different from the American experience--would be much more useful for the contemporary student.

All of the texts had good illustrations and all provided review questions as well as a bibliography for extra reading. This format is definitely an improvement over past works.

In the past few weeks Professor Bean has given the students a selection from Wallbank and Taylor's Civilization, past and present on interpretations of the Industrial Revolution. The point of this passage is to argue that the notion of the Industrial Revolution and its consequent changes in society are not easily categorized as once was thought possible. We now

[1] This text was used in the high school class that participated in the study reported in the previous paper in this volume.

know that the process of adopting machines for human labor, the construction of factories, the large growth of population, the use of new materials and world-wide marketing of goods, happened at different times in diverse places and the effects of this revolution vary considerably.

The authors, in attempting a critique of historians who have written on industrialization use complex prose, difficult to follow. They employ strange words like "eotechnical" and "paleotechnical" to describe the stages of industrialization. I am not convinced that the goal of the text, to provide an explanation of industrialization, may not be harmed rather than helped by such a discussion. Since Garden Grove High School students have never been involved in any controversy over the time, depth and consequences of industrialization, why bring them into it? My advice would be to construct a descriptive passage of what happened and then try to explain its effects. The instructor could and should build upon this narrative to explain that, when considering most human events which happened in the past, it is very difficult for historians to reach a consensus.

The industrialization of nineteenth century Europe is a very complex period of economic and social development. In presenting the material in narrative form, the text can limit confusion. Avoiding past academic debates, time can be found for asking questions about the student's own experiences with industrialization, for example, the difference between working in a refinery in Long Beach and picking strawberries on the Irvine Ranch. By noting how industrialization's progress is so rapid in the former and so slow in the latter,

parallels can easily be drawn with the nineteenth century and industrialization's varied effects upon the working population.

In conclusion, I would suggest that to produce better texts requires a collaborative effort: specialists in history, graphics, English composition and, of course, reading must all be involved. Too many texts reflect the concerns of their authors and not the needs of the students to whom they are addressed. Sometimes it is forgotten that story texts are written to be read. Comprehension of content through improvement in readability must mark the effective text of the future.

APPENDIX TO CHARLES FRAZEE'S PAPER

SPARTA*

Sparta's history is an exception to that of most other Greek city-states. Sparta was never ruled by tryants, but neither did it move toward democratic government...

Sparta was run as a military camp, closed to outside influences. Foreigners were driven from the city-state; Spartans were not allowed to travel. To prevent revolt among the Helots, a secret police force was created to spy on them. War was declared on the Helots once every year so that suspected troublemakers could be wiped out without violating the law against murder.

The citizens, the Spartans themselves, were subject to a rigid, militaristic upbringing. All weak and deformed babies were abandoned to die of exposure. At age seven, the Spartan boy was taken from his parents to be educated in military discipline and patriotism by the state. The training included exposure and merciless floggings to toughen the boy for the rigors of war. At times he was given nothing to eat except what he could steal. The important thing was to avoid being caught in the act. The training of Spartan boys is described in this essay by the Athnenian historian, Xenophon (ZEN-uh-fun), who lived in Sparta and its vicinity for many years.

Essay (social history)

Spartan girls were also subjected to severe discipline as preparation for motherhood. Men could marry at age 20, but had to live in military barracks until they were 30. At that time they could participate in the assembly and hold government posts.

The Spartan way of life achieved the purpose for which it was intended. Its citizens were intensely patriotic, and its army was unequaled as a fighting force. But extreme regimentation had its costs. Sparta contributed almost nothing to the great period of Greek philosophy, science, art, and literature. It never progressed beyond an agricultural economy. Instead, it became the model of the closed society, wary of outside ideas and fearful of attack from within and without.

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*Excerpt from: Ostrowski, R. & Kemper, J. Echoes of Time: A World History. New York: NY: McGraw-Hill, 1977, 186-189. Used in a 10th grade class.

SPARTA*

The Dorians, the last and least civilized of the groups that invaded Greece from the North, moved South to the Peloponnesus about 1100 B.C. They conquered and settled the region of Laconia and made the city of Sparta their capital. The enslaved natives numbered twenty times as many as the Spartans, but the Spartans controlled them by force. The natives and their descendants were always hostile.

In spite of this danger, Sparta seemed almost undefended as compared with most Greek cities. It was built in a valley, not on a hill, and no wall surrounded it. Spartans were boastful people, and one of their leaders said, "A city is well fortified which has a wall of men instead of brick." Nearly everything in Spartan culture was devoted to this militaristic idea--this "wall of men."

Social Groups. The population of Sparta was divided into three groups. Most important were the citizens--the descendants of the Dorian invaders--who controlled the government. To support the citizens and their families, the government divided all its land equally among citizens. With each allotment went slaves to work it.

The Spartans called the second group of people by the Greek word that meant "neighbors." They were free, but were not citizens. They lived in the towns and cities, and most of them engaged in commerce and industry. Some "neighbors" became rich, but they could never be citizens.

The lowest group were the conquered people of Laconia who had been enslaved; they were called Helots (Hel-uts). Because the spartans lived in constant fear of a slave revolt, they tried to prevent the Helots from developing any leaders. At regular intervals the Spartans killed all Helots who were either mentally or physically outstanding. There never was a successful Helot rebellion. The brutal system worked, but as you will see, it had its price.

Government. An assembly of all citizens over thirty years of age elected the officials and voted on major policies. A council of elders consisting of two kinds and twenty-eight members, all over sixty years of age, proposed the laws and policies on which the assembly voted. The two kinds, elected by the assembly from two royal families, served as high priests, judges, and army commanders.

Neither the assembly nor the council of elders had much authority. The real rulers of Sparta were five ephors (meaning "overseers") elected by the assembly. These five men had unlimited power to act as guardians of the state.

Sparta's rulers used their unlimited powers harshly. For example, because the ephors feared that the people would come to love money and luxuries, they prohibited the use of gold and silver. Money was made of iron bars, which were too heavy to carry around and would

not buy much. The ephors also feared that contact with outside peoples and ideas would weaken discipline and obedience. Therefore, they did not permit citizens to travel, and foreign visitors were made to feel unwelcome.

*Excerpt from: Mazour, A. & Peoples, J. Men and Nations: A World History. New York: NY: Harcourt Brace Jovanovich, 1971, 1968, 94-95.

SPARTA*

One of the Peloponnesian states, Laconia, was the homeland of Sparta. The Spartans were descendants of the Fierce Dorians, who, you will remember, had earlier conquered the Achaeans. The Spartans forced the captive Achaeans to work on the land as Helots, or virtual slaves. Later, the pressure of a growing population drove the Spartans to make Helots of their neighbors, the Messenians. The Helots lived under such wretched conditions that they constantly threatened revolt. One such uprising, by the Messenians in 650 B.C., lasted for twenty years.

The need to control their rebellious subjects forced the Spartans to center their lives around the army and to place their government under the control of a military aristocracy. To become a well-trained and well-disciplined soldier was the sole job of the Spartan citizen.

Spartan education created an efficient army. On the day of his birth, a Spartan boy was taken to the elders of Sparta for a careful inspection. If the infant had been born weak or deformed, he was left on a mountainside to die, because the elders thought that he could never perform his strenuous duties as a citizen-soldier. If declared physically fit, he was allowed to live with his family until the age of seven. Then he left his home to live in public barracks and begin his military training. A Spartan boy was trained to become a strong and fearless soldier, able to endure hardship and suffering. Even in winter he was allowed to wear only one garment and was required to go barefoot and sleep outdoors. His chief food was a very bad-tasting black broth, but as part of his training he was taught to feed himself by stealing food from farms and gardens. If caught, he was whipped--not for stealing, but for being so clumsy as to be found out. As a boy approached manhood and service in the army, he was beaten each year in public. This abuse taught him to endure pain in silence.

Spartan youths were expected to be modest in manner and brief in speech. According to tradition, Lycurgus, a famous Spartan lawgiver, made special rules governing the behavior of Spartan boys in public.

> ...they were to walk in silence...and to keep their eyes fixed upon the ground before them. And you might sooner expect a stone image to find a voice than any of those Spartan youths.

Spartans were known for their short, abrupt speech, a way of talking which is now called laconic, after Laconia, the state ruled by Sparta. You will see in Chapter 12 how the Spartan system of education differed from that of other city-states of ancient Greece.

Spartan girls, like their brothers, were given athletic training and taught to be fanatically loyal to the city-state. When a soldier left for battle, his mother handed him his shield, on which his body would be brought back if he were killed. The shield was so large that flight from the enemy was possible only by leaving it behind. As his mother gave her son the shield, she warned, "Come back with your shield or on it."

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*Excerpt from: Rogers, L., Adams, F., Brown, W. Story of Nations. New York: NY: Holt, Rinehart and Winston, Inc., 1976, 1968, 81-83.

Session IV

Dan Donlan

Learning from Text Project

University of California, Riverside

Teaching Students to Judge the Relative Importance of History Content

Teaching Student to Judge the Relative Importance of History Content

Dan Donlan

University of California, Riverside

At the beginning of the session, I instructed participants to break into four to six small groups. Since small group leaders were available, one was assigned to each group. As it turned out there were four small groups; two small group leaders were instructed to move from group to group.

The purpose of the session was to take the participants through the booklet presented in the Appendix to this paper, "Graphic Organizers and Diagrammed Paragraphs: Aids to Comprehending College Level History Test--Materials and Techniques." I was to to "talk them through" the book, stopping at key times so that the participants could work out exercises and generate questions. The small group leaders were to provide instructions for the exercises, provide instructional guidance, and solicit and answer questions. They referred some questions to me. (The leaders had been taken through the booklet the day before and shown how to guide the participants in the completion of the exercises.) During the 75-minute session, the groups completed five exercises under the direction of the small group leaders:

1. Exercise 7: Locating Key Words
2. Exercise 9: Determining Idea Relationships of Key Words
3. Exercise 11: Constructing Graphic Organizers (Items 6 and 7 only)

4. Exercise 14: Constructing Graphic Organizers for Paragraphs

5. Exercise 17: Diagramming History Text

At the conclusion of the presentation, I directed participants to examine the graphic organizer for the booklet (last page) which showed the relationships of the concepts presented duirng the 75-minute session.

APPENDIX TO DAN DONLAN'S PAPER

Graphic Organizers and Diagrammed Paragraphs: Aids to Comprehending College Level History Text

- Materials and Techniques -

Dan Donlan/Harry Singer
School of Education
University of California, Riverside

Contents

Item	Substance	Page
1	How a poor reader reads	1
2	How a good reader reads	2
3	Main ideas in a text: Key words and topic sentences	3
4	Nouns as key words	3
5	Verbs as key words	3
6	Other parts of speech as key words	3
7	Exercise: Locating key words	4
8	Relationships of key words	5
9	Exercise: Determining idea relationships of key words	5

Item	Substances	Page
10	Graphic Organizers and key words	6
11	Exercise: Constructing grpahic organizers	7
12	Topic sentences as main ideas	9
13	Paragraphs and graphic organizers	10
14	Exercise: Constructing graphic organizers for paragraphs	10
15	Diagramming paragraphs	11
16	History text diagrammed	13
17	Diagramming history text	14
18	References	17

Explanation

Exercise

References

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UC/CSUC LFT Project - 1

Poor Readers vs. Good Readers

This is what a poor reader sees:

therootsofcubannationalism
anaggressivevocalanti-americannationalismshaped
the characteranddirectionoftherevolutionof1959the
originsofcubannationalismdatedbackto
nineteenth-centurycolonialdiscontentwithspanish
ruleafter1898nationalistsentimentgrewrapidly
accordingtophilipwbonsaltnedesiretofreecubafrom
americantutelagewasbasedontheconvictionthatthe
fateofcuba...wasnotincubanhandsthatconviction
becamethesalientfeatureofthemilitantnationalismof
thefirstcuban-borngenerationofthe1920sbothspain
andamericahelpedtofostercubannationalismbutofthe
twotheunitedstateswasessentiallyresponsibleforthe
jingoisticnationalismthatcharacterizedthe
fidelistamovementthehistoriesofcubaandtheunited
stateshadbeenintertwinedalmostfromtheinceptionof
americanindependencein1783earlyamericansolicitude
forcubastressedstrategicfactorslessthanahundred
milesoffthefloridacoastcubalayinthestrategic
caribbeancubamustremaininfriendlynandswhileaweak
spainposednothreatfrenchorbritishcontrolen-
dangeredamericaninterestsfurtherpolicy-makersin
washingtonbelievedthatcubawouldfallintotheirlapif
spainlosttheislandandtheythereforeblockedforeign
effortstoliberatetheislandandfrownedoncuban
sentimentforindependencepriortothecivilwarthe
unitedstateshadoccasionallyexpressedadesireto
acquirecubaifthiscouldnotbeaccomplishedthe
departmentofstatewascontenttoallowthemadrid
governmenttoruletheislandwhilesouthern
expansionistswishedtopurchasecubatoincreasethe
slaveterritoryoftheunitedstatessectionalpolitics
thwartedthisattempotdebateonthecubanquestion
continueduntilthecivilwaruptedthenorthern
victoryatappomattoxsilencedtheexpansionists
cry--throughpresidentulyssessgrantmadeonemore
half-heartedefforttopurchasecubashieldedbythenew
americanmilitarymightcubaneednolongerbelongeither
tospainortotheunitedstatesitcouldbeindependent

Donlan/Singer © 1983
UC/CSUC LFT Project - 2

2

This is what a good reader sees:

the ROOTS of CUBAN NATIONALISM
an aggressive vocal ANTI-AMERICAN NATIONALISM
SHAPED the character and direction of the
REVOLUTION of 1959 the ORIGINS of cuban national-
ism dated back to NINETEENTH-CENTURY colonial
discontent with SPANISH rule AFTER 1898
nationalist sentiment GREW rapidly according to
philip w bonsal the DESIRE to FREE CUBA from AMER-
ICAN TUTELAGE was based on the CONVICTION that THE
FATE OF CUBA...WAS NOT IN CUBAN HANDS that
CONVICTION became the salient feature of the
MILITANT NATIONALISM of the FIRST CUBAN-BORN
GENERATION of the 1920s both spain and america
helped to foster cuban nationalism but of the two
the united states was essentially RESPONSIBLE for
the JINGOISTIC NATIONALISM that characterized the
FIDELISTA movement the HISTORIES of CUBA and the
UNITED STATES had been INTERTWINED almost from the
inception of american independence in 1783 EARLY
AMERICAN solicitude for cuba STRESSED STRATEGIC
factors less than a HUNDRED MILES off the FLORIDA
coast CUBA lay in the strategic caribbean cuba
must remain in friendly hands while a weak SPAIN
posed NO THREAT FRENCH or BRITISH CONTROL EN-
DANGERED AMERICAN INTERESTS further POLICY-
MAKERS in WASHINGTON believed that CUBA
would fall INTO their LAP if SPAIN LOST the ISLAND
and they therefore BLOCKED FOREIGN EFFORTS to
LIBERATE the ISLAND and FROWNED on CUBAN SENTIMENT
for INDEPENDENCE PRIOR to the CIVIL WAR the UNITED
STATES had occasionally expressed a DESIRE to
ACQUIRE CUBA if this could not be accomplished the
department of state was CONTENT to ALLOW the
MADRID government to RULE the island while
SOUTHERN EXPANSIONISTS wished to PURCHASE CUBA to
increase the SLAVE TERRITORY of the united states
SECTIONAL POLITICS THWARTED this aim a hot DEBATE
on the cuban question continued until the CIVIL
WAR ERUPTED the NORTHERN VICTORY at appomattox
SILENCED the EXPANSIONISTS cry--through president
ulysses s grant made ONE MORE half-hearted EFFORT
to PURCHASE CUBA shielded by the new american
military might CUBA NEED NO LONGER BELONG either
to SPAIN or to the UNITED STATES it could be
independent

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Main ideas are found as

- key words
  - Nouns
  - Verbs
  - Other parts of speech
- Topic sentences
  - Begin paragraphs
  - End paragraphs
  - Are in the middle of paragraphs
  - Don't exist or are implied

Nouns as key words.

- Part of Hitler's control was his effective use of radio.
- Columbus' discovery of America was a benchmark in history.

Verbs as key words.

- Atilla overran the city, killed the leaders, and enslaved the rest.
- Sherman burned Atlanta and destroyed all property through Savannah as he marched through Georgia.

Other parts of speech as key words.

- Atilla was a dictator just as was Hitler.
- Hitler committed suicide, but Mussolini was assassinated.
- The gray ship was saved but the blue one was torpedoed.

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Exercise: Read the following paragraph. When you are through, underline all key words. What percentage of the paragraph is key words?

Jose Marti opened the final battle for independence in 1895. The United States stayed aloof diplomatically but Spanish attempts to quench the fires of rebellion and Cuban rebel activity in New York and Florida made strict neutrality impossible. A Cuban government-in-exile operated in New York, where Marti made his headquarters, while the Cuban Revolutionary Party solicited funds, recruited men, purchased arms and munitions, and enlisted ship captains for an invasion of the homeland. Spanish consuls in American cities complained that there were Cubans in troop-training centers drilling for the approaching Armageddon, a complaint amply justified later when Marti and his band of fighters landed in Cuba from American ports. All in all, some sixty Cuban expeditions had escaped the vigilance of American officials by 1898. Many of the early patriots acquired American citizenship--and still participated in the battle to free their former homeland. Heading

the list of patriots who acquired American citizenship was Tomas Estrada Palma, subsequently first president of the Cuban Republic. Edwin F. Atkins, a sugar planter, noted in his Sixty Years in Cuba that nearly all the members of the rebel junta in New York were naturalized American citizens.

Key words can relate to one another in 4 ways:

- Key words are equal in value:

  General = Admiral

- Key words are opposite in value:

  War ≠ Peace

- Key words are superordinate or subordinate to one another:

  dog > collie

  collie < dog

- Key words may have no relationship to one another.

  horse ∅ tuna sandwich

Exercise: Read each of the following pairs of words, and write, between the words, the approximate symbol.

=

≠

> <

∅

1.	revolution	☐	rebellion
2.	affluence	☐	reform
3.	radical	☐	extremist
4	Democrat	☐	liberal
5.	congress	☐	confusion
6.	insurrection	☐	declared war
7.	inflation	☐	prosperity
8.	Peace Corps	☐	Vista
9.	progressive	☐	revolutionary
10.	agrarian	☐	industrial

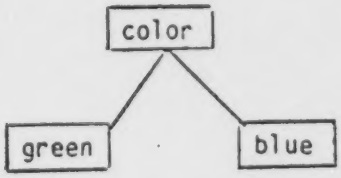
Idea relationships can be organized graphically:

Ideas

Graphic Organizers

color > green

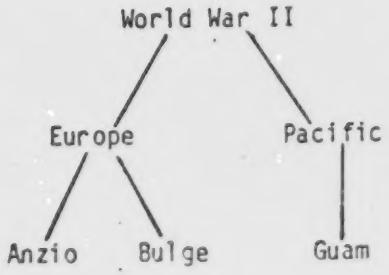
green = blue



World War II > Europe

Europe = Pacific

Anzio = Bulge = Guam



World War II > Pacific > Guam

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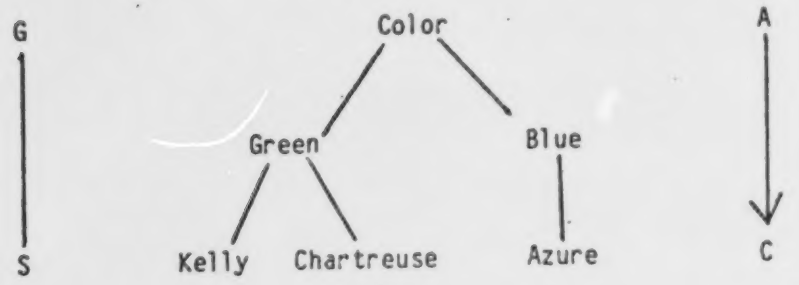
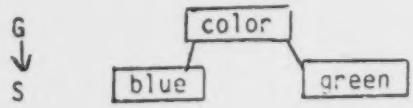
Note: Ideas are arranged in a hierarchy from general (G) to specific(s) or from abstract (A) to concrete (C):



11

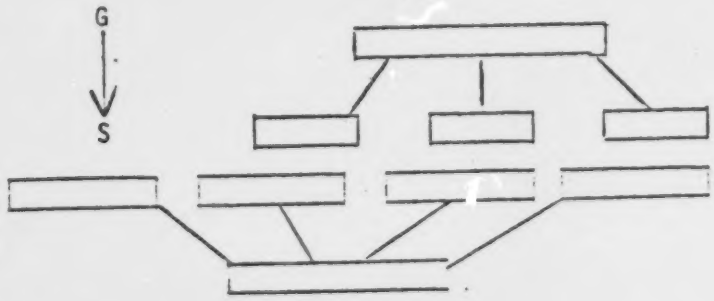
Exercise: Below are groups of words at the left and incomplete graphic organizers on the right. Write the words on the left in the correct places on the diagrams.

Example: blue
color
green

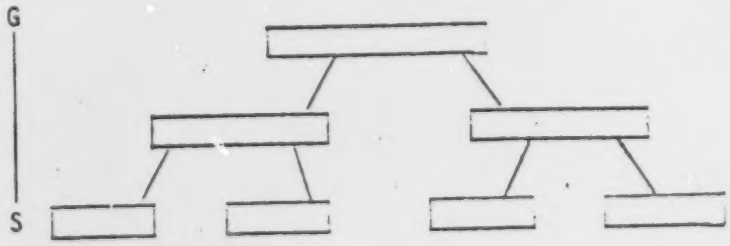


1. food
water
necessities
air

2. Jackson
Washington
Presidents
Jefferson
Harding



3. Europe
Tokyo
large cities
Copenhagen
Peking
Asia
Paris



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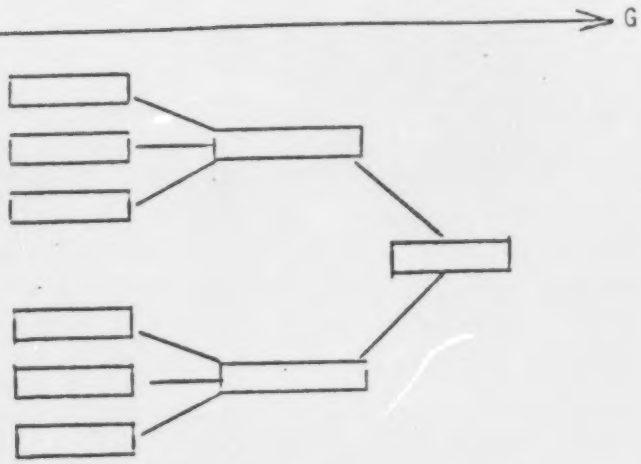
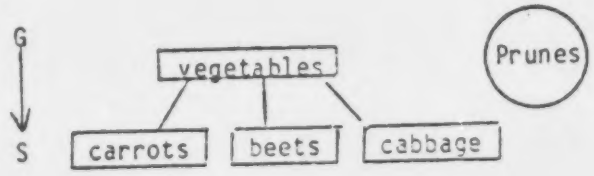
4. period
punctuation
beginning a sentence
proper names
mechanics of English
quotation mark
capitalization
apostrophe



Comment: In the following exercises, some ideas do not fit. These are placed in circles.

Example: carrots
beets
vegetables
prunes
cabbage

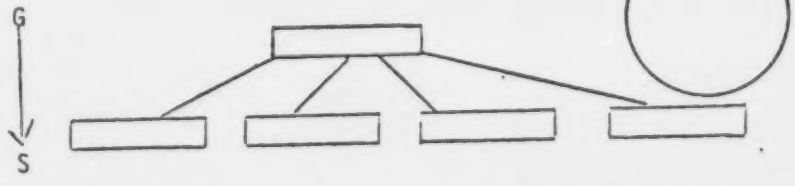


- or -

vegetables > carrots = beets = cabbage ∅ prunes

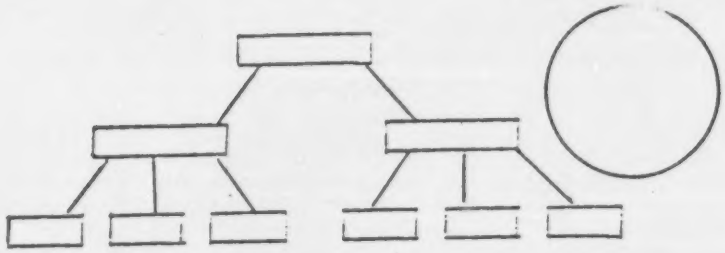
Separate the ideas that fit with the ones that don't, as shown above.

5. France
England
NATO
United States
West Germany
Poland



6. Pacific
   Anzio
   World War II
   battles
   Philippines
   Bulge
   Europe
   Dunkirk
   Guam
   Geneva

G
↓
S



7. Now without any assistance, diagram the relationships that exist among the following words. Draw your own graphic organizer.

Spain
Castro
Spurs to independence
Marti
Congressional action
unsucessful reform
United States
1898-1958
successful reform
history of revolutionary Cuba
influential leaders
exploitation of industry
stock market crash on Wall street
1700's - 1800's
royal edict
explanation of agriculture

Main ideas are also found in topic sentences. Topic sentences can be found:

- At the beginning of a paragraph.

Examples

Dictators flourished in depression-torn Europe. Hitler ruled Germany with an iron fist. Mussolini controlled Italy. Stalin dominated Russia.

- At the end of a paragraph

  Hitler controlled Germany in the 1930s. Mussolini dictated policy formation in Italy. Stalin reigned fiercely over Russia. Dictators flourished in Europe during the 1930s.

- In the middle of a paragraph

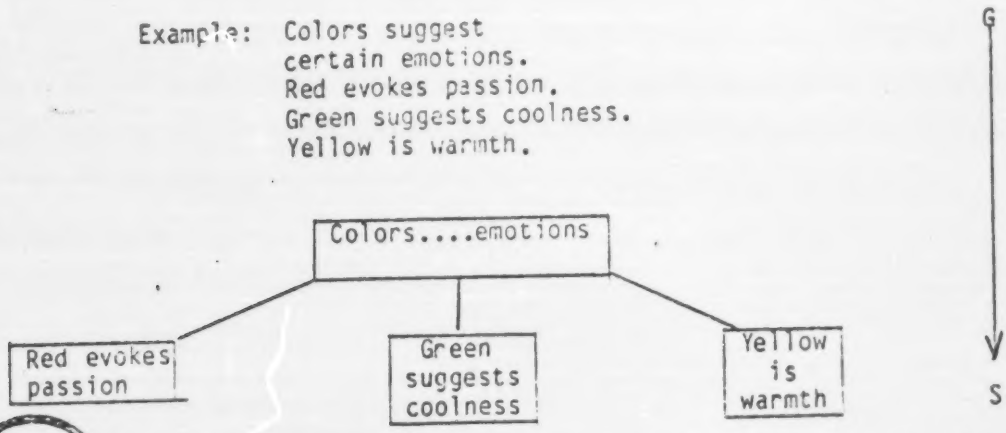
  Hitler dominated Germany. He was, however, only one of several European dictators. Mussolini controlled Italy. Russia was under the iron fist of Stalin.

- Non existent

  Hitler dominated Germany. Mussolini controlled Italy. Stalin ruled Russia with an iron fist.

13 Paragraphs can be organized graphically in much the same way as are key words:

Example: Colors suggest certain emotions. Red evokes passion. Green suggests coolness. Yellow is warmth.



14 Exercise: Read the following short paragraphs and organize them graphically showing (a) the general or main idea, (b) the specific ideas that support the main idea, and (c) the ideas that don't fit:

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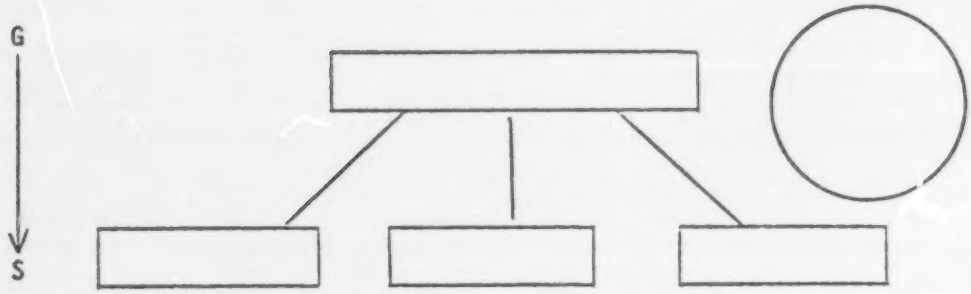
The army swept in from the east. The navy attacked from the south. Paratroupers dropped from the sky. The crucial city was under siege. The terror would not begin for another month.



Now read the following paragraph and construct your own graphic organizer.

In early October of 1929 the stock market was fluctuating daily, even hourly. Unemployment was rampant. Farmers were producing more than they could sell. The times were right for economic disaster to hit the United States. Things were not any better in Europe.

15

Idea relationships in paragraphs can be presented as graphic organizers or as diagrammed paragraphs; as shown by the following examples:

Paragraph

John is smart.
John's brother is dumb.

John is smart.
He gets straight As.

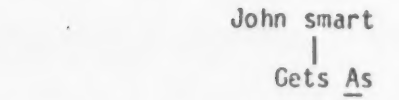
John is smart.
He gets straight As.
One A was earned in chemistry.

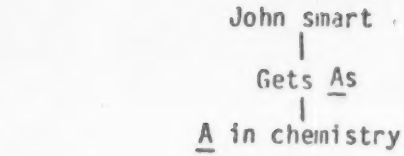
Red is a long wave color. Green is a short wave color. Colors have varied wave lengths.

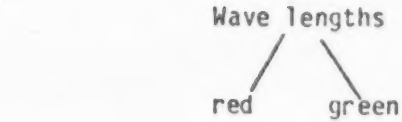
Talking birds are but one variety of a large species. Parrots are large talking birds. Parakeets are tiny talkers. In fact, the variety of birds is staggering. Birds of prey are one fearful variety. The hawk makes many a mouse run for cover. Some birds have clipped wings and can fly limited distances.

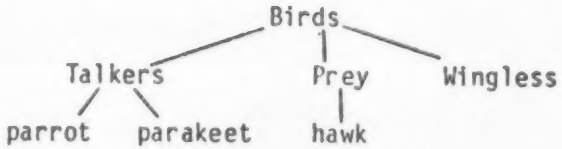
Graphic Organizer

John = John's brother









Diagrammed Paragraph

1. John is smart.
1. John's brother is dumb.

1. John is smart.
   2. He gets straight As.

1. John is smart.
   2. He gets straight As.
      3. One A was earned in chemistry.

   2. Red is a long wave color.
   2. Green is a short wave color.
1. Colors have varied wave lengths.

   2. Talking birds are but one variety of a large species.
      3. Parrots are large talking birds.
      3. Parakeets are tiny talkers.
1. In fact, the variety of birds is staggering.
   2. Birds of prey are one fearful variety.
      3. The hawk makes many a mouse
   2. Some birds have clipped wings and can fly limited distances.

16 Here is a passage of college history text that appeared at the beginning of this booklet, diagrammed according to idea relationships.

1. An aggressive, vocal, anti-American nationalism shaped the character and direction of the Revolution of 1959. [end of paragraph]

2. The origins of Cuban nationalism dated back to nineteenth-century colonial discontent with Spanish rule.

2. After 1898 nationalist sentiment grew rapdily.

3. According to Philip W. Bonsal, the desire to free Cuba from American tutelage was based on the conviction that "the fate of Cuba...was not in Cuban hands."

4. That conviction became the salient feature of the militant nationalism of the first Cuban-born generation of the 1920's.

2. Both Spain and America helped to foster Cuban nationalism, but, of the two, the United States was essentially responsible for the jingoistic nationalism that characterized the Fidelista movement. [end of paragraph]

1. The histories of Cuba and the United states had been intertwined almost from the inception of American independence in 1783.

2. Early American solicitude for Cuba stressed strategic factors.

3. Less than a hundred miles off the Florida coast, Cuba lay in the strategic Caribbean.

3. Cuba must remain in friendly hands.

3. While a weak Spain posed no threat, French or British control endangered American interests.

3. Further, policy-makers in Washington believed that Cuba would fall into their lap if Spain lost the island, and they therefore blocked foreign efforts to liberate the island and frowned on Cuban sentiment for independence. [end of paragraph]

2. Prior to the Civil War, the United States had occasionally expressed a desire to acquire Cuba; if this could not be accomplished, the Department of State was content to allow the Madrid government to rule the island.

3. While Southern expansionists wished to purchase Cuba to increase the slave territory of the United States, sectional politics thwarted this aim.

3. A hot debate on the Cuban question continued until the Civil War erupted.

3. The Northern victory at Appomattox silenced the expansionists' cry--through President Ulysses S. Grant made one more half-hearted effort to purchase Cuba.

2. Shielded by the new American military might, Cuba need no longer belong either to Spain or to the United States. It could be independent. [end of paragraph]

17

Exercise: Now, read the following passage. Place a 1 in front of the sentence that contains the paragraph's main idea. Place 2s in front of sentences that are immediately subordinate to this main idea. Place 3s in front of sentences subordinate to 2s; and so forth. When you are through check your numbers with the key on page 16.

With Cuba free from Spain, the Americans turned their attention to the job of formulating diplomatic ties with the island and preparing the Cubans for the challenge of self-government. The United States and Cuba were not ready for either task. Ambiguity dictated the American response and the Cubans were politically immature. During the four centuries of colonial rule, they had been given only a limited voice in local matters, and had been without a legislative body of their own until 1897. No sense of social responsibility had motivated either the masters or the colonials. In the absence of self-rule, the Cuban drive for autonomy relied on terror and violence. Further,

the Cubans won their independence from Spain despite the protests of local property-holders who predicted mob rule. And some of the insurgents justified their fears. In turn, the Spaniards had sacked the island before departing. Emlio Roig de Leuchsenring, the noted Cuban historian, spoke of a colonia superviva that survived the fall of the mother country to frustrate and undermine the dreams of the patriot fathers.

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Key

1. With Cuba free from Spain, the Americans turned their attention to the job of formulating diplomatic ties with the island and preparing the Cubans for the challenge of self-government.

2. The United States and Cuba were not ready for either task.

3. Ambiguity dictated the American response and the Cubans were politically immature.

4. During the four centuries of colonial rule, they had been given only a limited voice in local matters, and had been without a legislative body of their own until 1897.

4. No sense of social responsibility had motivated either the masters or the colonials.

5. In the absence of self-rule, the Cuban drive for autonomy relied on terror an violence.

5. Further, the Cubans won their independence from Spain despite the protests of local property-holders who predicted mob rule. And some of the insurgents justified their fears.

5. In turn, the Spaniards had sacked the island before departing.

5. Emlio Roig de Leuchsenring, the noted Cuban historian, spoke of a colonia supervivа that survived the fall of the mother country to frustrate and undermine the dreams of the patriot fathers.

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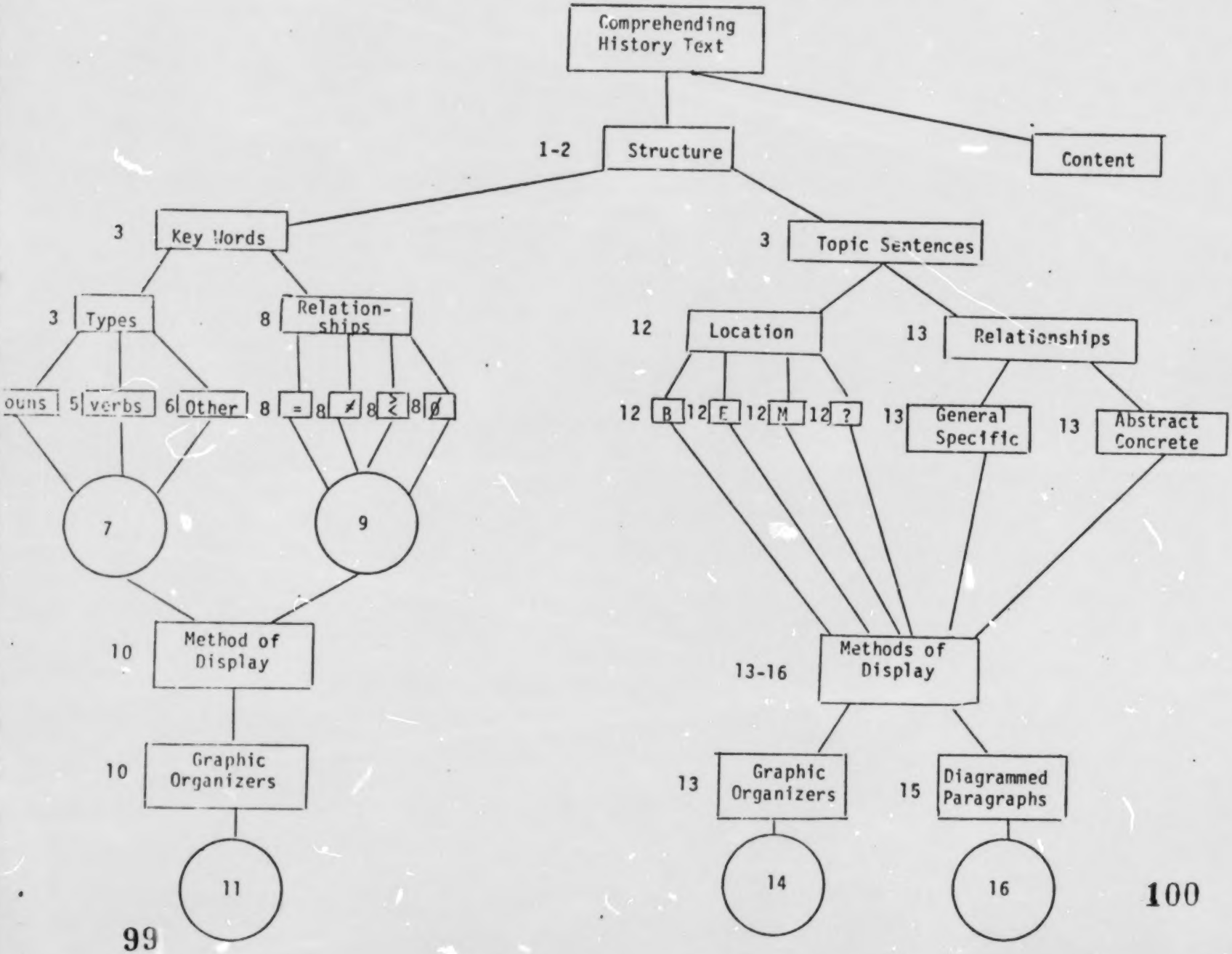

Session V

Judie Thelen

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Advance Organizers for Learning from Text

Advance Organizers for Learning from Text

Judie Thelen

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Graphic organizers were first developed by Barron (1969) on the belief that "...the vocabulary of content subjects can be introduced in such a way that the words assume the form of "advance organizers" and provide the students with cues to the 'structure' of subjects" (p. 29).

The purpose of this paper is to define advance organizers, describe the importance of providing students with the structure of subjects, broaden the concept of graphic organizers and provide examples of strategies that will be useful in clarifying concepts.

Advance Organizers

Although advance organizers were a specific teaching strategy developed by Ausubel (1960) they now have come to mean any strategy designed to organize concepts in learners' prior experiences before learners encounter new concepts to be learned. They are called advanced organizers because they are given in advance to organize cognitive structures. Some of the literature erroneously calls these strategies "advanced organizers." This misunderstanding is probably a result of the way the organizers are written--at a higher level of abstraction than the new material to be learned. For example, if a teacher wanted to present the concept "potential energy" to a class, the teacher should first make sure that the learners understood the more abstract concept "energy."

Why? Because there is reason to suspect (Ausubel, 1960, Bruner, 1960) that concepts are hierarchically organized in a learner's long term memory, or cognitive structure. Thus, it is reasonable to assume that new concepts or new examples of existing concepts, can become incorporated into existing hierarchies if the learner can see a relationship between the new material to be learned and what he or she already knows. If the teacher cannot relate new material to what is already known, the learner will attempt to memorize, rather than learn, the new material. Therefore, it is extremely important for the teacher to find out what the learner already knows about the new concept to be learned, and if little is known about existing concepts that can be related to the new material then the tacher should provide relevant background knowledge. For example, if the new concept to be learned is a triad (a chord of three tones), the teacher should establish how much the learners know about chords. If the students have had little prior experience with chords, it would seem fruitless for the teacher to begin teaching major or minor triads.

Graphic Organizers

Barron's graphic organizers were an attempt to show students how the new concepts to be learned related to other concepts in the hierarchy. An organizer contains a superordinate concept under which the new concept to be learned can be categorized. It also contains coordinate concepts and subordinate concepts as shown in Figure 1. These organizers have been described in many IRA publications and instructions on how to construct and use them can be found there

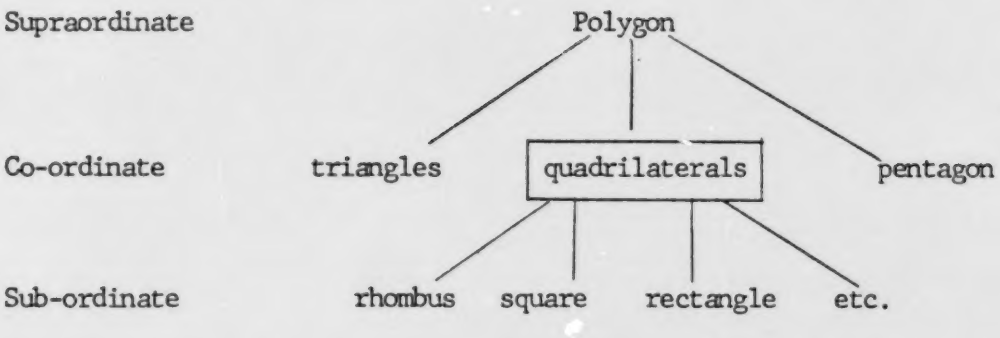


Figure 1. Graphic organizer target concept "quadrilateral" (Thelen, 1979)

(Catterson, 1974; Manzo, 1975; EArle, 1976; Hansell, 1976; Thelen, 1976; Vacca, 1977; Lundstrum & Taylor, 1978).

Providing students with graphic organizers before they read is an important step in facilitating concept attainment, but it may not be enough. Ausubel gave us three conditions for meaningful learning to occur:[1]

1. The material presented must be capable of being related in some "sensible" fashion.
2. The learner must possess relevant ideas to which this new idea can be related or anchored.
3. The learner must actually attempt to relate the new idea to those he already possesses.

In other words, the new material to be learned should be organized, i.e., have some structure and the learner must have concepts immediately available in his or her cognitive structure to which the new concept can be related. However, if the learner doesn't act on the material, that is, actually attempt to relate the new idea to those he or she already possesses, meaningful learning may not take place. In other words, the learner will probably memorize the new material rather than attempting to relate it to those concepts he or she already knows. On the other hand, if a learner can generalize to new examples of a concept or discriminate from non-examples, we can assume that the learner really understands a concept and is attempting to relate this new idea to those he already possesses.

---

[1]A phrase that is synonymous with meaningful as used here is "capable of being related" as opposed to the commonly used synonym, "significant."

The graphic organizer does not provide the learner with enough information to be able to discriminate and generalize to new situations. For example, we can show a student how the concept "triad" relates to other examples of chords, e.g., seventh chords, but unless we provide the learner with more information he or she may just attempt to memorize the fact that major and minor triads are examples of triads and may never be able to recognize new examples of triads, or discriminate them from examples of other chords. Moreover, it is not always possible, or wise, to list all examples of a concept in a graphic organizer. We shall explain in our steps on developing a graphic organizer and using it as an advance organizer for comprehending a text, the information or procedures a teacher must use to make the concept meaningful to the student and how to use additional examples of the concept in the instructional procedure.

Concept Attainment

At the same time that Barron was developing his graphic organizer theory, Frayer, Frederick, and Klausmeier (1969) were testing their model for concept attainment. This paradigm appears to be an extension of Barron's model. They not only recommended clarifying concepts by showing conceptual relationships but suggested that teachers provide students with many examples, and nonexamples of the new concept as well as the relevant and irrelevant attributes of the concept. More recent literature by Klausmeier (1979) broadens the concept of attributes.

In the earlier models (Fig. 2) an attribute referred only to the intrinsic properties of objects. Relevant attributes were those

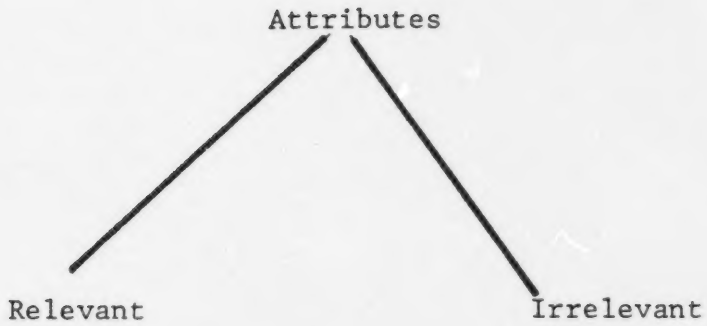


Figure 2. Narrow reference of attributes
(Klausmeier,et. al., 1979)

characteristics common to every example. Take, for example, the concept quadrilateral. The relevant attributes were that it was a plane, closed polygon with four sides and four angles.

Irrelevant attributes were those characteristics which occurred only in particlar examples and could be varied without changing the examples to a non-example. In the example of a quadrilateral, the irrelevant attributes would be the size of the angles, the parallelness of the sides, etc.

Klausmeier (1979) now defines attributes to include intrinsic properties, functions, and invariant relationships. The three kinds of attributes he deals with, as shown in Figure 3, are:

1. defining - includes all the attributes that are necessary to determine whether an instance is or is not an example of a concept.
2. critical - those necessary to distinguish members of one coordinate class from members of other coordinate classes.
3. variable - those necessary for discriminating among members within a given class (pp. 15-16).

Thus, the defining attributes of a quadrilateral are polygon, plane, simple, closed, four sides, four angles. The critical attributes are four sides and four angles. The variable attributes are the size of its angles and sides, its position, e.g. and the parallelness of its sides.

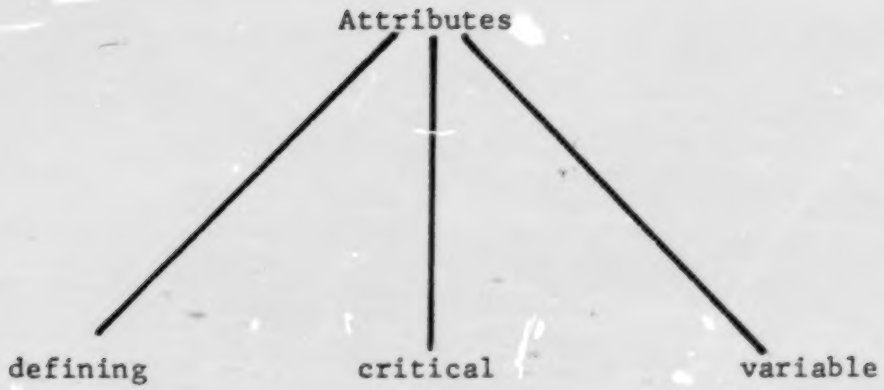


Figure 3. Broader reference of attributes
(Klausmeier,et. al., 1979)

Steps in Teaching a Concept

Before the teacher presents this to students the teacher must:

1. Develop the target concept into a hierarchy depicting supraordinate, coordinate, and subordinate concepts. This information will be used in step 4.

2. Define the concept to insure accurate attributes.

3. Tell the students what the name of the concept is that you're going to teach and ask them to contribute any examples they may have. This can be accomplished by having students break into small groups of no more than five and making a list. After a specified period of time, usually no more than 5 to 10 minutes, ask for the longest list. While the other groups listen, a representative of the group dictates the list as you write it on the board or overhead. Begin organizing the examples into categories. Other groups are then invited to add to, or challenge, the examples of their peers. Nonexamples are usually examples under coordinate concepts, that is, if students give the name of birds as mammals, write those examples under the slot that will be later labeled as birds, a coordinate concept of mammal.

4. Finish constructing the hierarchy using the data from step 1, explaining why you are placing the terms where you are.

5. Guide the students in discovering what characteristics are common to all examples. These will be the defining attributes. This is the part of the lesson where you can clear up any misconceptions. For example, if the students' examples of elected officials of a democratic society are all men, the students may conclude that "maleness" is a defining attribute.

6. Next, guide the students in finding the difference among the concept examples. These differences are the variable attributes. For example, mammals differ in their habitat, height, weight, hair, etc.

7. When you feel that the students understand the concept, supply them with examples and nonexamples not previously discussed. These could be the concepts that will be encountered in the reading assignment. If the students can discriminate and generalize to the new, you can feel confident that they understand the concept.

Hierarchically structured knowledge models shown in Figures 4, 5 and 6, were developed by junior and senior high school science and English teachers in the Rockwood, Missouri, District and Pittsburgh, Pennsylvania, schools to use in teaching the concepts mammals, angio-sperms and diary/journals.

Figure 4.
Hierarchy of target concept mammals

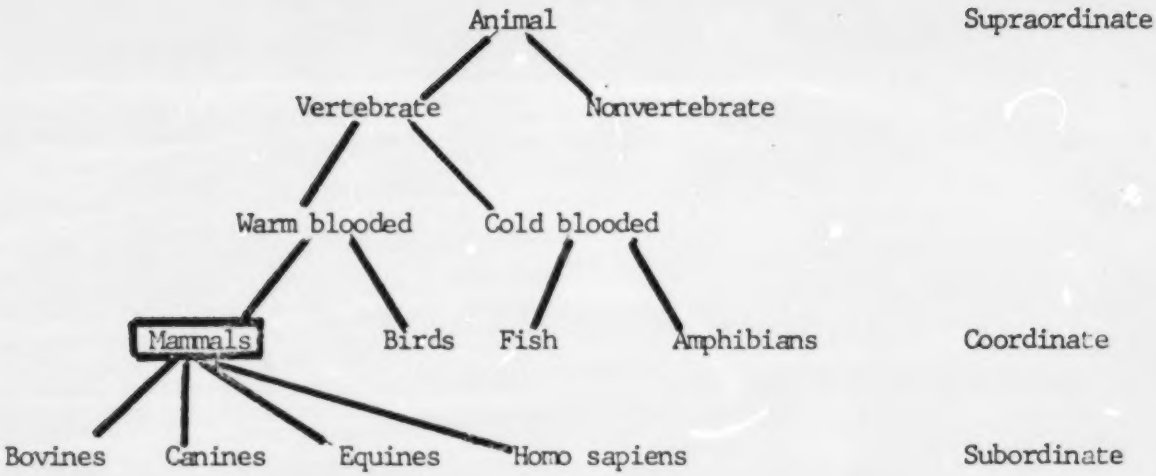
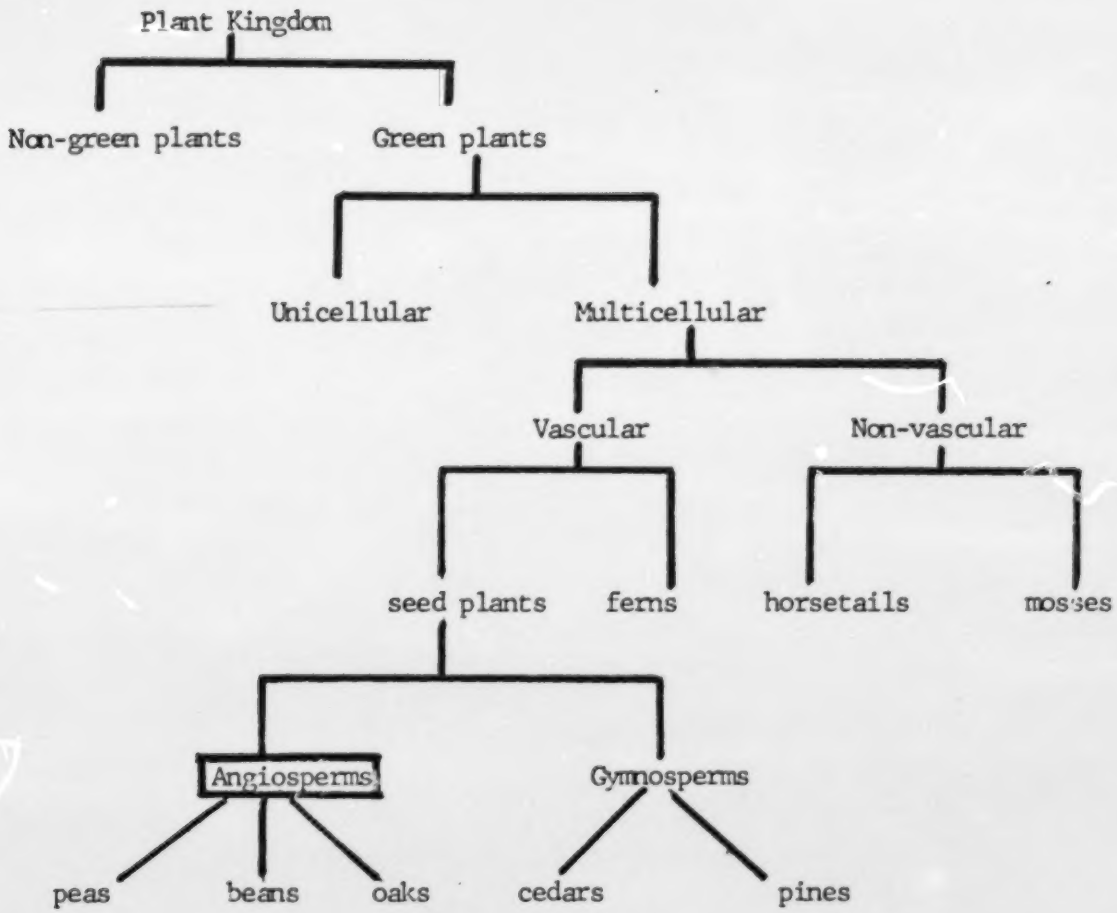


Figure 5.
Hierarchy of target concept angiosperms



Concept: Angiosperms (flowering plants)

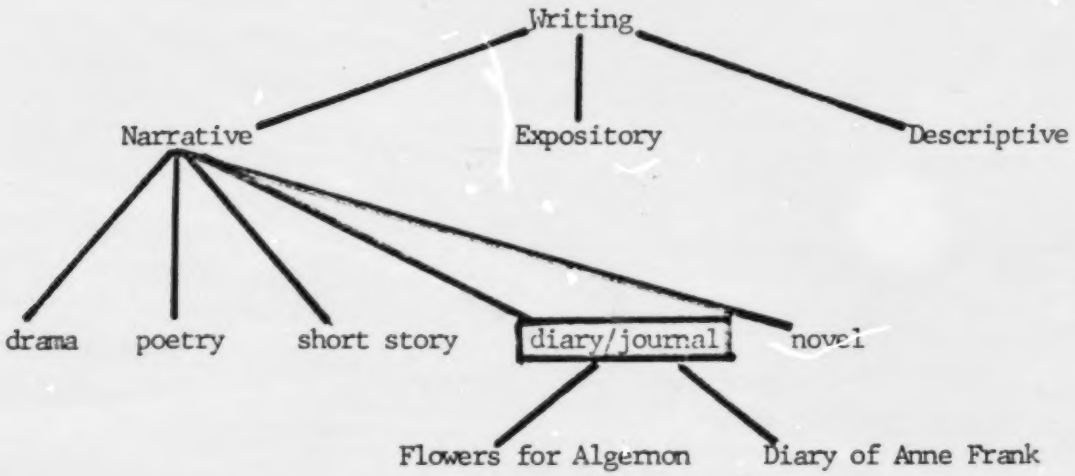
1. Examples:
   peas
   coleus
   roses
   maples
   grass

2. Relevant attributes:
   produces flowers
   produces fruit
   produces covered seeds

3. Irrelevant attributes:
   color of flower
   number of seeds
   size of plant, seed, or flower
   structure of flower
   where it grows
   kind of fruit produced

4. Non-examples: (examples of gymnosperms)
   pine
   cedar
   moss
   fern

Figure 6.
Hierarchy of target concept diary/journal



Concept: Diary/Journal

1. Examples:
   Flowers for Algernon
   Diary of Anne Frank

2. Relevant attributes:
   personal
   entries are dates
   entries are made on some type of schedule (daily, weekly)
   writing style is informal
   entries are short

3. Irrelevant attributes:
   fiction
   nonfiction
   writing schedule can vary
   form
   readership (for private use or for an audience)

4. Nonexamples:
   poetry
   drama
   short story
   novel

The steps, developed by Thelen (1982) in presenting the information from the Frayer-Klausmeier model, are inductive and involve discovery learning. This approach is necessary because so many students appear to utilize only concrete thoughts (Olson and Ames, 1972; Peters 1975-76) and are not ready for formal operational thoughts. Inductive learning begins at their level and proceeds upwards as far as they can go. In short, they must engage in discovery learning as opposed to receptive learning. In discovery learning the learners must act on the material in order to be led to the final form of the concept. In receptive learning, learners are given the concepts to be learned in final form. But in both instances the material in its final form must be related to cognitive strucutres so that they can be integrated with the students' knowledge systems and consequently have maximal utility in subsequent situations.

A knowledge model enables a teacher to ascertain what learners already know and therefore what background information they need to know. For developing the knowledge, theteacher can use both discovery and receptive learning techniques. When provided with sufficient background concerning the new material in their textbooks, students should find new material easier to comprehend.

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Session VI

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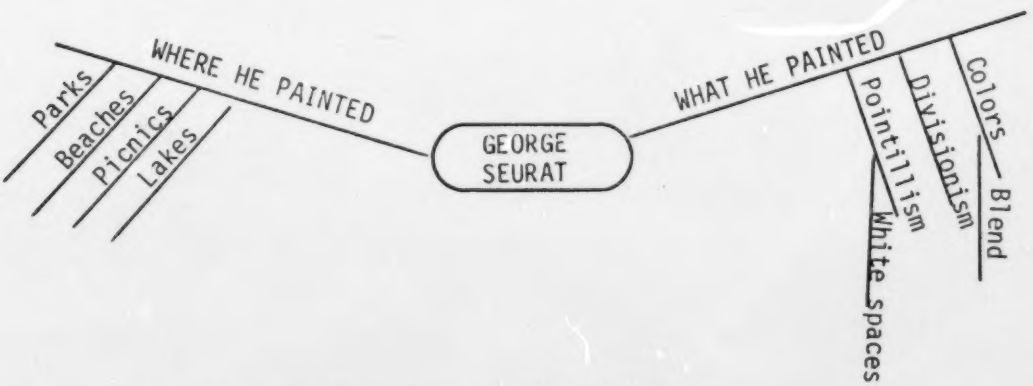
Presentation consisted of discussion of numerous examples. The following handout was distributed to the group.

MAPPING: A TECHNIQUE FOR INTEGRATING READING AND WRITING

Every writer begins by facing a blank page waiting for ideas and words to emerge. Some writers make lists before writing, some draw pictures, some work out ideas in their minds before they write, some visualize scenes, some outline, but all writers develop techniques for beginning their writing journey. Mapping, a new prewriting technique many Writing Project teachers have found successful, assists students, K-12, in the first stages of this journey. Because mapping helps writers generate ideas, because it allows writers to add or delete information easily, because it is a process easily learned, it is one of the most powerful prewriting techniques.

The map below illustrates the power of mapping both for organizing information for writing and gathering information from reading. Jenny, along with other eight-year-olds in her class, was asked to write a paper about an artist. Her map and writing below illustrate the effectiveness of the mapping procedure:



This part of Jenny's paper was mapped first:

> George Seurat did not paint pointillism, he called his painting divisionism and it often got mixed up with pointillism. Pointillism leaves white sections on the canvas. And George Seurat painted without leaving spaces.
>
> In his pictures he uses very many colors. Especially in his sky, here are the colors he uses: green, blue, light blue, white, gray. But all the different colors blend together to make one color.
>
> He paints of outdoor places and at the places the people are having fun. Here are the places he paints, parks, beaches, picnics and lakes. You see in his pictures people sailing, people strolling, children bouncing balls and holding their mother's hand, and people with their pets, people in shade under their umbrellas, people fishing and canoeing.

This is the part of the paper which Jenny did not map:

> Impressionist art is natural and direct. Seurat's paintings are stiff and figures seem immovable.
>
> In the painting Courbevore Bridge the striking power of colors based on the contrast of tones is sustained by a pattern of aspiring verticals broken only by the hazy, distant horizontal of the bridge and the dark diagonal of the riverbank.

Talking with the young girl, it was clear that the last paragraph above was copied directly out of the encyclopedia and was incomprehensible to her. Fortunately, she ended in her own words:

> I think George Seurat's paintings are good because of the colors he uses and the way he uses them.
>
> George Seurat died of diptheria at the age of 31. George Seurat knew a lot about dots and now so do you.

The map assisted Jenny in gathering her information, organizing her ideas and restating the information in her own words.

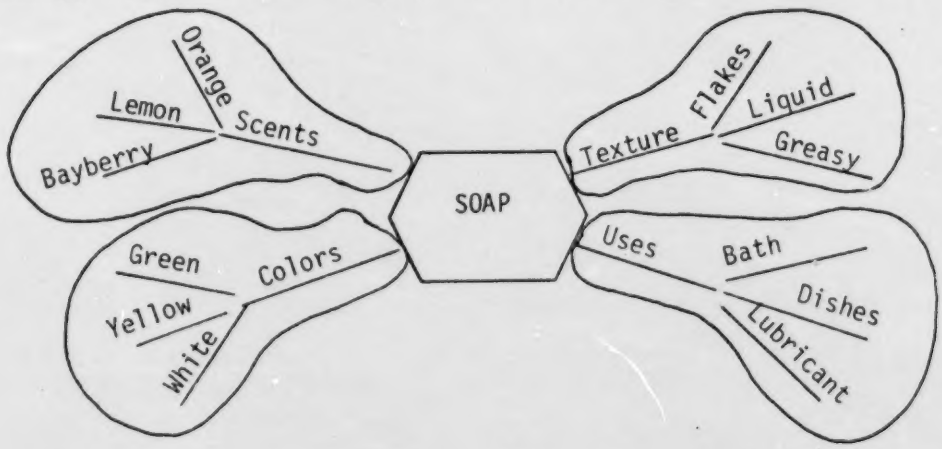
Introducing Mapping to a Classroom

When introducing mapping to students, start with an everyday topic which allows them to generate an extensive list of words and terms. With elementary students I have used topics such as sports, soap or toys; with secondary students such topics as the troubles of being seventeen, advertising, propaganda, scars, etc. After students have generated their lists, I have them organize the words into categories.

SOAP

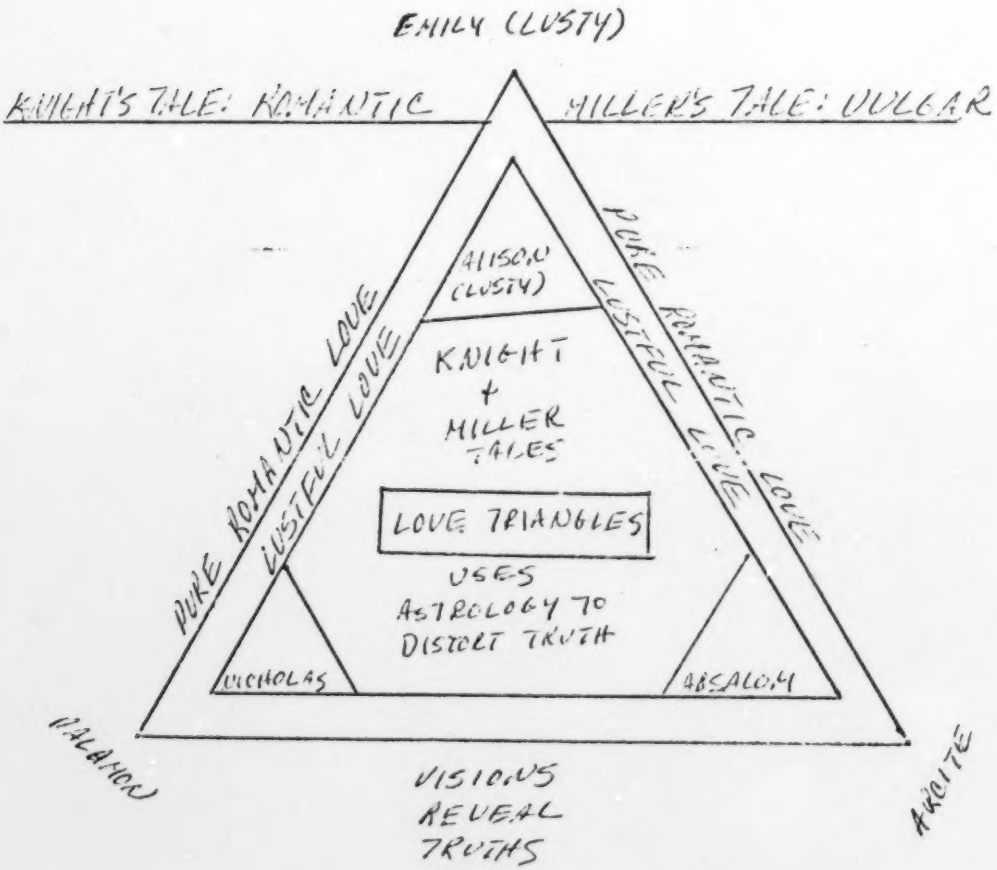
Categories:	texture	uses	colors	smells
	liquid	bath	green	bayberry
	flakes	dishes	yellow	lemon
	greasy	lubricant	white	orange, etc.

Finally, students place these categories and words on a map:



As a next step teachers might want students to map and write about their best friends or to use mapping as a first step toward writing their own autobiographies.

After a first introduction to mapping, students, typically, create more individualistic maps. Older students develop more sophisticated maps that help them structure their own writing and, with reading assignments, maps that reflect the way an author has structured ideas in a short story or essay. The map below illustrates how a fifteen-year-old student, by using mapping, was able to show the close parallels that exist when comparing Chaucer's "Knight's Tale" with the "Miller's Tale":



Comparison of Knight's Tale and Miller's Tale

After the knight finished his beautiful (and overlong) tale, everyone agreed it was noble. The drunken miller, however, thought he could match any tale of the knight's. At first, the two tales seem to be totally opposite; but, after a closer look one can find many similarities.

Both tales involve a love triangle, where two men seek the love of the same woman and fight for her. In The Knight's Tale the characters are Palamon, Arcite, and Emily. In The Miller's Tale the characters are Absalom, Nicholas, and Alison. The knight's triangle is very pure and romantic. The miller's triangle is somewhat raunchier, such as Nicholas had already bedded Alison while Absalom was still begging for her love.

Visions are used in both tales. Palamon, Arcite, and Emily pray to the gods in an effort to guide their destiny, and Emily sees a vision of the goddess Diana. In the miller's tale visions are mocked. Nicholas is also using visions in an effort to guide his destiny or his and Alison's. He pretends to have seen a vision from the gods, telling him a great flood is coming, to trick the carpenter into hiding in a barrel in anticipation of the flood.

Destiny solved the differences between Palamon and Arcite. Both men won, even though Arcite died. He won Emily's hand in marriage and then had an accident. As he lay dying he gave Emily to Palamon. So it was in the miller's tale; everyone "won," so to speak. Absalom has kissed an ass, Nicholas' rear end is severely burned, and the carpenter receives a broken arm. Alison and Emily just sort of stood by and got the best of both deals.

The miller took almost every detail of the knight's tale and twisted them into something vulgar so that they seem to be very dissimilar. However, after careful scrutiny, many likenesses can be found. As a matter of fact, both stories parallel each other.

Clearly, the mapping techniques assisted this student in writing a paper which both analyzes and synthesizes the plot structures of the two stories. Because mapping can illustrate the whole structure of a story, essay, or chapter of a text, revealing relationships which might otherwise go unnoticed, it is a powerful tool for thinking and learning.

Rationale

Writing is a thinking process involving many steps. We can help students with the process by teaching them different techniques which will help them generate and discover their ideas. Mapping helps students shape their writing for special purposes and audiences. When we give students different techniques for gathering their ideas, when we help them learn about the variety of choices they have when shaping their ideas, when we help them with their thinking, students' writing will improve. Because mapping helps students generate and organize ideas, it aids students in the writing process.

Mapping also adds a new dimension to student thinking; it provides a visual/spatial dimension which enhances their verbal thinking, allowing poorer writers to generate and shape ideas with ease and assisting other writers with analysis and synthesis.

Mapping seems to be effective because it combines what Suzanne Langer called the discursive--speaking, listening, reading, and writing--with the presentational--art, music, dance, and sculpture--two basic ways human beings symbolize experience. By using both verbal and spatial modes of thinking, mapping takes full advantage of the symbolic process.

Conclusion

If we want students to generate words easily, if we want to help students organize their essays or stories efficiently, if we want students to write coherently, then mapping is one of the tools we will teach. As a prewriting activity mapping helps students start writing easily, as a shaping activity mapping helps students form their ideas, as a holistic activity mapping helps thinkers synthesize ideas. Because it takes advantage of our verbal and visual abilities, mapping adds a new dimension and power to all language activities. Teachers who have introduced mapping to their students have found it a powerful new tool for improving student writing.

Summary

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Learning from Text:

Summary of the Preconvention Institute

What do we know about learning from text? What strategies are available to aid students in learning from text? The Learning from Text Institute at the May 1983 International Reading Association Convention addressed these questions.

The institute grew out of a joint University of California-California State University Learning from Text Project. The director of this project, Harry Singer, opened the institute by describing how the learning from text project began and the conceptual influence on the project of researchers such as Holmes, Rothkopf, Anderson, Brown, Kolers, and Kintsch.

To provide a context for the subsequent presentations, Singer offered a definition of learning from text.

> Learning from text is a process in which learners, according to their changing purposes and demands of the task, mobilize their resources to interact with the text. As a result of this interaction, they construct meaning for the text and new knowledge for themselves which they can evaluate and then store in long-term memory or encode into oral or written responses. (Singer & Bean, 1982)

He then described the classroom learning model that underlies hypotheses and research endeavors in learning form text. This model involves the instructor interacting with learners, texts, and tests in an ecological (or "real world") setting which affects all aspects of learning from text. A major hypothesis derived from the model is that superior achievement is obtained when these factors -- instructor, learners, texts, and tests --

are involved in a coherent relationship.

Singer's talk also included a discussion of the results of a study to determine the relationship of the ability to learn from text to the college success of freshman at several University of California and California State University campuses. When a number of factors were entered into a multiple regression equation, three factors were the best predictors of college grade point average: (1) background knowledge as measured by high school grade point average, (2) ability to learn from text as measured by the Sequential Test of Educational Progress: Reading, and (3) attitude toward learning as measured by the Carter Attitude Scale (part of the California Study Methods Survey). It is interesting to note that students' attitudes towards learning make a significant contribution to their success as students. Since students' attitudes towards learning include their morale, their confidence in what they are doing as they try to learn, and their desire to know, it is obvious that affective factors interact with the ability to learn from text.

The importance of affective influences on learning from text was detailed by Irene Athey. The theoretical base for her discussion was Holmes' substrata-factor theory which she capsulized by noting that individuals can arrive at the same level of competence through very different routes and that individuals can bring together different skills for different purposes. But what is it that mobilizes these skills and strategies? Holmes maintained that the mobilizer is the individual's value systems. In her own research, Athey supported this position by demonstrating the importance of affective variables in accounting for an appreciable amount of variance in comprehension. Furthermore, what is particularly interesting

to note is that affective items can be translated into metacognitive, or self-monitoring, strategies which suggests that there is not a real dichotomy between the affective and cognitive domains. In other words, interests and attitudes are just as crucial in instruction as those areas which have traditionally been called cognitive.

If students are taught helpful strategies for learning from text, these strategies should also improve their success and confidence in their ability to learn. Hence, learning from text strategies should not only improve the ability to learn from text, but also, indirectly, students' attitudes toward learning. A number of speakers discussed strategies that facilitate learning from text.

Tom Bean discussed studies in which middle-grade, high school, and college students have benefitted from learning how to summarize. Bean explained both intuitive and explicit approaches to teaching summarization strategies. Teachers might start with an intuitive approach in which students must write what a paragraph is about using a limited number of words. Feedback during group discussion assists students in discovering what it means to summarize. A more explicit technique involves teaching students how to apply selection, deletion, and generalization rules to generate a summary.

Another instructional technique that can facilitate learning from text is the use of graphic organizers. Jack Sorter, who has used graphic organizers with his high school students, attested enthusiastically to their value. Judie Thelen explained how they can be used to make new concepts clear to students so that they will be able to understand the concepts in their textbooks. Students are asked to brainstorm what they know about a concept. The teacher helps them organize this knowledge into a hierarchical

model or graphic organizer. The teacher then shows the students where new information fits into the model and assists them in discovering the commonalities and differences among the examples of the concept. Students' understanding is tested by presenting them with instances to judge as examples or non-examples of the concept. Thus, this instructional technique involves eliciting students' prior knowledge, helping them organize it, and then adding to it.

Dan Donlan demonstrated how teachers can assist students in constructing graphic organizers from their content area reading assignments. The technique moves from underlining key words in a passage, to relating key words to one another, and then to constructing hierarchical graphic organizers based on the relationships among the key words. At a level higher than key words, Donlan also demonstrated how the relationship of sentences in paragraphs can be graphically organized and how that relationship can be diagrammed using a numbering and indentation system.

Graphic organizers may be considered a subcategory of mapping. In fact, Owen Boyle referred to graphic organizers as linear maps. Boyle advocated mapping as a powerful technique for organizing information. Mapping can take on many forms and can be defined as a picture of ideas. The aim of mapping is to facilitate the thinking and planning needed to produce good writing. In reading, mapping seems useful as a way of helping readers restructure what they have read in order to make it their own.

As teachers use learning from text strategies such as those discussed in the institute, they may need to make a distinction between two types. Some strategies are to be taught for continuous explicit use. But other strategies may not be used explicitly after they have served their purpose of helping students learn to engage in a particular way of processing

information. Strategies of the latter type include those that are very time consuming for long term use, but in effect force students to engage in the appropriate learning processes which can eventually become internalized.

In his presentation, George McConkie provided a theoretical context to account for why activities such as summarization, graphic organizers, and mapping are useful in learning from text. Such strategies are needed because of certain characteristics of knowledge and language. Knowledge is relational in nature. We acquire and refine knowledge by forming categories and relations among categories, and by grouping relations into abstract knowledge structures that allow us to handle complex information as a unit. Knowledge structures are non-linear wholes. However, language is linear in nature. Complex, interrelated information has to be expressed linearly. In order to comprehend, readers are faced with the task of putting linearly expressed information back together in a network of knowledge. The strategies discussed in this institute are useful in learning from text because they help readers reconstruct complex information structures from linear language.

The linear characteristics of language can be more difficult for students to handle if the material is dull and if it gives no hint to students about the reason it might be relevant to them. Yet, as Charles Frazee showed us in examples from history texts, dull and irrelevant writing is common in textbooks. Perhaps part of the problem with text writing might be solved if authors inserted more commentary to the readers. Avon Crismore argued that metadiscourse -- or when the writer talks to the reader -- is helpful to readers. For example, an author's commentary to the reader might include a statement of purpose or the use of first person. Crismore noted that compared to textbooks, "real" texts have more "announcements" from authors.

These announcements or comments from the author seem to benefit readers.

Thus, the institute provided both useful strategies to enhance learning from text and a conceptual framework to account for why such strategies would be useful. The activities were very capably presided over by Debbie Osen Hancock and facilitated by Nancy Rogers-Zegarra, Virginia Berry, Ruth Nolte, Hallie Yopp, Pat Phelps, and Terrie Rogers

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Conclusion

Two Phases of Reading Development: Acquisition and Learning from Text

Harry Singer

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Conclusion

Differentiation of the Term Reading: Acquisition and Learning from Text

In my study of attitudes towards teaching vs. learning from text, I found a significant difference when the term reading occurred than when the phrase learning from text appeared in the questionnaire.[1] All the other words in the questionnaire remained the same. In general, high school teachers had a more favorable attitude towards teaching students to learn from text than to teaching them reading. High school teachers identify reading as something that is taught in elementary school and should be learned at that level; if it still needs to be learned at the high school level it is remedial. In contrast, high school teachers believe learning from text is appropriate for their level of instruction because that is what they expect students to do when they assign them chapters in texts as homework. In short, high school teachers are willing to accept the task of teaching students to learn from text.

Because of the negative attitudes of high school teachers towards the term reading and positive attitudes toward learning from text, I recommend we change all the designations in high schools and universities from reading to learning from text. If we do, we'll have learning from text labs, learning from text teachers, and learning from text curricula. We will not give reading tests, but learning from text tests. Likewise, we will have learning from text materials. In short, we should recognize that most high school students are beyond the acquisition phase and into the learning from text phase of reading development. Therefore, unlike Shakespeare's statement that "a rose by any other name would smell as sweet," a change from the term reading to learning from text will have a profound effect on high school and university faculty's reception of the phrase learning from text. I urge all of you who are involved with high school and university programs to go back to your institutions and change the names as rapidly as you can.

Thank you all for coming. I hope you gleaned some new ideas and will take them back to your school districts and universities and put the ideas into practice.

[1] Harry Singer and Dan Donlan, Reading and Learning from Text. Boston: Little, Brown, 1980). (See Chapter 2.)

Appendix

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PHELPS, Pat--Riverside, CA
PICCIANO, Mark--San Francisco, CA
PORTER, Emily--Sapulpa, OK
QUICK, Juanita--Tacoma, WA
REILAND, Mary--El Segundo, CA
RICHARDS, Grant--Bountiful, UT
ROBERTS, Lula--Atlanta, GA
ROGERS, Theresa--Champaign, IL
ROGERS-ZEGARRA, Nancy--Mooresville, NC
RUDYK, Barbara--Winnipeg, Canada
RYNDERS, Peter--Pontiac, MI
SATTLER, Joan--Milwaukee, WI
SEEBER, Suzanne--Manhattan, KS
SULLIVAN, Kathy--Omaha, NE
SWENSON, Audrey--Maple Grove, MN
THELEN, Judie--Cumberland, MD
THEOBALD, Barbara--New York, NY
TREMEMAN, Paul--Flint, MI
VERVILLE, Kathy--Phoenix, AZ
WILEY, Mary--Houston, TX
WRIGHT, Dennis--Surrey, BC
YANOW, Melvin--Bayside, WI
YIM, Diane--Annandale, VA
YOPP, Hallie--Fullerton, CA
YOUNGBERG, Millie--Berrien Springs, MI